United States Court of Appeals

for the

District of Columbia Circuit

TRANSCRIPT OF RECORD

APPENDIX TO APPELLANT'S BRIEF.

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT.

Appeal No. 11632.

United States Court of Ap
For the
District of Columbia Circ
FILED FEB 5 1953
Joseph W. Stewa
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LEWIS DOUGLAS YOUNG,
Appellant,

v. 852

JOHN A. MARZALL,
Commissioner of Patents,
Appellee.

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA.

CLARENCE M. FISHER,
834 National Press Building,
Washington, D. C.,

HERBERT B. BARLOW,
2005 Industrial Trust Building,
Providence 3,
Rhode Island,

Counsel for Appellant.

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IN THE

United States District Court

FOR THE DISTRICT OF COLUMBIA.

LEWIS DOUGLAS YOUNG, 13 Laura Street, Providence, Rhode Island,
Plaintiff,

v.

JOHN A. MARZALL, Commissioner of Patents, Washington, D. C.,
Defendant.

Civil Action.
No. 2808—51.

Complaint for Issuance of Letters Patent.

(Filed July 19, 1951.)

1. The jurisdiction of this Court depends upon the Patent Laws of the United States, this Complaint being filed under Section 4915, Revised Statutes (Comp. Stats. 9460. Title 35, Section 63, as amended).

2. The plaintiff, Lewis Douglas Young, is the sole inventor of the subject matter disclosed and claimed in an application for United States Letter Patent for Cardboard Box Spring Hinge, filed January 5, 1949, Serial No. 69,301.

3. The Board of Appeals of the United States Patent Office refused to allow five claims of said application Serial No. 69,301, to wit:

> 1. In a cardboard box a body section and a cover section each section having vertically disposed rear walls with their edges abutting, a flexible plate extending along the inner surface of the rear wall of each section, each plate having a plurality of holes along its length with a plurality of projections from

the edge of each hole embedded in the rear wall over which the plate extends with the free ends of the projections deflected in a plurality of different directions to clinch over the outer surface of the rear wall [118] of the section and firmly secure the plate to the section, and means to hingedly attach said plates together throughout the major portion of their length.

2. In a cardboard box as in claim 1 wherein a spring acts upon said plates.

3. In a cardboard box as in claim 1 wherein an arcuate spring with inturned ends engages said plates to urge them in one direction or the other depending on the relative position of the plates.

4. In a cardboard box as in claim 1 where the clinching portions of said projections is each a small point to be relatively obscure on the outer surface of the box.

5. In a cardboard box as in claim 1 wherein the rear wall extends into the opening of each plate as clenched to the rear wall.

4. The defendant, John A. Marzall, Commissioner of Patents of the United States, by the aforesaid decision of the Board of Appeals in the United States Patent Office has refused and still refuses to grant Letters Patent of the United States to the plaintiff on said application Serial No. 69,301, including said five claims.

5. The said decision of the Board of Appeals was rendered on the 15th day of May, 1951, and within six months last past, and no appeal has been taken from said decision of the Board of Appeals to the Court of Customs and Patent Appeals, and no such appeal is pending or has been decided.

WHEREFORE, the plaintiff demands that this honorable Court authorize the Commissioner of Patents to issue to plaintiff Letters Patent of the United States embodying the aforesaid claims, upon the filing in the United States Patent Office of a certified copy of such adjudication and upon compliance with the requirements of [119] the law in such cases made and provided.

LEWIS DOUGLAS YOUNG,

By CLARENCE M. FISHER,

CLARENCE M. FISHER,
Attorney for Plaintiff,
834 National Press Building,
Washington, D. C.

Of Counsel

HERBERT B. BARLOW,

HERBERT B. BARLOW,
2005 Industrial Trust Building,
Providence 3, Rhode Island.

Answer to Complaint.

(Filed July 18, 1951.)

[120]

THE UNITED STATES DISTRICT COURT,

FOR THE DISTRICT OF COLUMBIA.

LEWIS DOUGLAS YOUNG,
Plaintiff,
v.
JOHN A. MARZALL, Commissioner of Patents,
Defendant.

Civil Action No. 2808—51.

E. L. REYNOLDS, Solicitor,
United States Patent Office,
Washington 25, D. C.,
Attorney for John A. Marzall,
Commissioner of Patents.

To the Honorable the Judges of the United States District Court for the District of Columbia.

1. The defendant admits the allegations of paragraph 1 of the complaint.

2. He denies the allegations of paragraph 2.

3, 4, 5. He admits the allegations of paragraphs 3, 4, and 5.

FURTHER ANSWERING the defendant states that the plaintiff is not entitled to a patent embodying the claims set forth in the complaint. For the reasons given and in [121] view of the references cited in the final rejection by the primary examiner of the plaintiff's claims, in the examiner's statement and in the decision of the Board of Appeals.

Profert of copies of the references, final rejection, examiner's statement and decision is hereby made.

E. L. Reynolds,
Solicitor, U. S. Patent Office,
Attorney for Defendant.

July 17, 1951.

I hereby certify that a copy of this Answer to Complaint was mailed today to the attorney for plaintiff, Mr. Clarence M. Fisher, 834 National Press Building, Washington, D. C.

E. L. Reynolds,
Solicitor.

Memorandum Opinion.

(Filed June 25, 1952.)

[122]

This does not rise to the dignity of invention.

Counsel will prepare proper findings, conclusions of law and judgment order.

Matthew F. McGuire, /s/
McGuire, J.

June 24, 1952.

Findings of Fact.

(Filed Sept. 22, 1952.)

UNITED STATES DISTRICT COURT,

For the District of Columbia.

Lewis Douglas Young,
Plaintiff,

v.

John A. Marzall,
Commissioner of Patents,
Defendant.

Civil Action
No. 2808—51.

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1. This is a civil action under the provisions of Section 4915 of the Revised Statutes (35 U. S. C. Sec. 63) in which the plaintiff, Lewis Douglas Young, seeks a judgment from this Court authorizing the defendant, Commissioner of Patents, to grant to plaintiff a patent based upon certain claims of the patent application of said Young, Serial No. 69301*, filed January* 5, 1949, entitled "Cardboard Box Spring Hinge". The claims are set forth in paragraph 3 of the complaint.

2. In the specification of the application at bar the alleged invention is described as one relating to a cardboard box in which a spring hinge joins the body and cover sections together, the hinge being constructed from two plates of lightweight metals, each [124] plate being provided with a plurality of openings, each opening having a plurality of prongs projecting therefrom, and each plate having eyes rolled upon an edge. In affixing the hinges to the box, the plates with the rolled edges are positioned in alignment to receive a pin and the prongs are pressed through the rear walls of the top and bottom sections of the box, and the points bent over to grasp the cardboard.

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* Corrected (Transcript in error).

3. The prior art as evidenced by the patent to Rhodes 1,430,029, granted September 26, 1922 shows the general combination of a cardboard box constructed of a top section and a bottom section with metal pieces constituting a hinge affixed to the rear walls of these sections. A second Rhodes patent, 1,626,301, granted April 26, 1927, shows an improved hinge for use in the same combination, this hinge being formed of metal pieces attached to the bottom and top sections of the box by prongs struck from the metal. This patent also shows a spring member co-operating with the hinge for holding the box cover in open or closed position.

4. Further, the Powell patent, 2,206,918, granted July 9, 1940 shows the attachment of metal stay elements to a cardboard box by means of a plurality of prongs surrounding holes struck from the elements, the prongs being driven into the paper board and clenched thereto by bending over the ends of the prongs.

[125] 5. The patent to Bicker, 1,461,175, granted July 10, 1923, described a hinge element constructed of a metal plate which is attached to a cardboard member constituting part of a box by pointed projections struck from the metal plate, the projections being driven through the cardboard by impact and clenched thereto by bending over the projections.

6. The testimony at the trial indicates that plaintiff's construction is an improvement over the prior art as depicted by Rhodes and Bicker.

7. The testimony at the trial indicates that plaintiff's structure has attained commercial success.

8. Plaintiff's structure utilizes Powell's attaching means with the hinge and spring structure of Rhodes.

9. Plaintiff's combination of features old in the prior art does not rise to the dignity of invention.

10. Plaintiff's claimed structure does not define invention in view of the prior art.

11. Claims 1 to 5 inclusive define no invention in view of the prior art.

12. Claims 1 to 5 inclusive are unpatentable over the prior art.

CONCLUSIONS OF LAW.

1. Plaintiff is not entitled to a patent containing any of the claims (1 to 5 inclusive) set forth in paragraph 3 of the complaint.

2. The complaint should be dismissed as to all the claims.

MATTHEW F. MCGUIRE, /s/

Judge.

Judgment.

(Filed Sept. 22, 1952.)

[124]

UNITED STATES DISTRICT COURT,

For the District of Columbia.

Lewis Douglas Young, Plaintiff, *v.* John A. Marzall, Commissioner of Patents, Defendant.	Civil Action. No. 2808—51.

This action came on to be heard at this term and thereupon upon consideration thereof, it is this 20th day of September 1952.

Adjudged that the complaint be and it is hereby dismissed, with costs against the plaintiff.

Matthew F. McGuire /s/

Judge.

Notice of Appeal.

(Filed Oct. 30, 1952.)

IN THE

UNITED STATES DISTRICT COURT,

FOR THE DISTRICT OF COLUMBIA.

LEWIS DOUGLAS YOUNG,
Plaintiff,

v.

JOHN A. MARZALL, Commissioner of Patents.
Defendant.

Civil Action.
No. 2808—51.

Notice is hereby given that Lewis Douglas Young, the plaintiff above named, appeals to the United States Court of Appeals for the District of Columbia from the final judgment entered in this action on September 20, 1952.

CLARENCE M. FISHER,

CLARENCE M. FISHER,
Attorney for Appellant, Lewis Douglas Young,
834 National Press Building,
Washington, D. C.

October 29, 1952.

Testimony.

[12] Mr. Barlow: I would like to offer in evidence a certified copy of the pending application of Lewis Douglas Young, serial No. 69301,* filed January* 5, 1949.

Mr. Schimmel: Is that the complete file or just the application?

Mr. Barlow: Just the application.

The Court: All right.

(Plaintiff's patent application was marked Plaintiff's Exhibit No. 1 and received in evidence.)

Thereupon Lewis Douglas Young was called as a witness, and being first duly sworn, was examined and testified as follows:

Direct examination by Mr. Barlow:

Q. Mr. Young, will you please state your name, age, residence, and occupation? A. Lewis Douglas Young, age sixty, 13 Laurel Street, Providence, Rhode Island, manufacturer of paper boxes.

Q. How long have you been engaged in the manufacture of paper boxes? A. Forty-two years.

Q. What is your present occupation? A. I operate Douglas-Young, Inc.

The Court: Just a minute. I come from the same part [13] of the country as you do, and we have a habit of talking very rapidly. And the reporter has difficulty. So if you will slow up a little bit now.

By Mr. Barlow:

Q. Are you an officer of Douglas-Young, Inc.? A. President and Treasurer.

Q. What is the business of Douglas-Young, Inc.? A. We manufacture fancy boxes for the jewelry and perfume trade, and they go a little beyond the ordinary box manufacturing. Most of these boxes require ideas and even mechanics or design.

---

* Corrected (Transcript in error).

Q. Are you responsible for some of the designs or inventions in boxes of which Douglas-Young are the manufacturer? A. Responsible for most of them.

Q. Are you the patentee of a number of patents? A. I am.

Q. Would you estimate about how many? A. Twelve, I should think.

Q. Mr. Young, with reference to hinge boxes with a spring for actuating the hinge, I show you a box and will ask you if you will tell me what that is. A. That is——

The Court: For the sake of the record, we will refer to that as Plaintiff's exhibit No. 2, marked as such for [14] identification.

(The box referred to was marked Plaintiff's Exhibit No. 2 for identification.)

The Witness: That is a metal box made by Fairington Manufacturing Company, and these boxes have been made for a great many years. My father about fifty years ago had an opportunity to buy Fairington at that time for about thirty thousand dollars, and he decided not to because thirty thousand dollars was a lot of money.

The Court: Fifty years ago.

The Witness: Yes, fifty years ago. And today this concern is worth millions. If my father would have built it up that high, I don't know.

But this idea is very old, and some time forty or fifty years ago they got a patent on that particular hinge spring that closed it down and held it up.

By Mr. Barlow:

Q. Will you describe what that structure is of that box and hinge? A. This is a metal form blanked out and shaped up and pierced to form prongs so that a metal hinge could be applied through holes in the hinge to attach that hinge and spring.

Q. What do you find for rigidity in the hinge in boxes attached that way? [15] A. Well, of course, this box is very rigid because it is metal. This particular type box went on for years without ever being interfered with by cardboard boxes.

One advantage that the cardboard box has and one disadvantage that this has is that they cannot make these with square corners, and in order to cover these, they have to use some kind of fabric, either fabricoid or cloth, but paper will not pull over the rounded corner. But in a cardboard box where the corners are square, you can use paper, and paper is usually a cheaper material than fabric.

The Court: Why is that so? Why can't you use paper on a cardboard box which is square and use it also on a metal box which is also square?

The Witness: Because the fabric will stretch. It will soften and stretch. Paper will not stretch over a round corner and be put on in one piece.

The Court: Why can't you use paper over a metal box?

The Witness: Because the rounded corner, it has to be put on without any slits in it. You can only do that with paper on square corners. A round corner you cannot cover with paper because the paper is so stiff.

The Court: I am a lay person in this business. You have fabricoid or some sort of material that is not paper that purports to represent some type of leatheroid or something of that character. Now, that is put on a metal box [16] around the corner, and you say that paper couldn't be put on a box of this character. Why?

The Witness: Because paper would not stretch enough. You have too much paper left on the corner, and it will not stretch to pull down nice and smooth.

The Court: That is on a rounded box. How about on a metal, square box?

The Witness: They don't make these square because they have to be drawn, they have to be stamped out and drawn up. So all metal boxes have rounded corners, and therefore they cannot put paper on.

The Court: They don't make square metal boxes because of difficulty in manufacture; it is more expensive to do that and it is easier to get mass production by stamping them out in the fashion you have indicated?

The Witness: Yes.

The Court: All right.

Mr. Barlow: I would like to offer in evidence the metal box just referred to by the witness as Plaintiff's Exhibit No. 2.

The Court: Very well.

(Plaintiff's Exhibit No. 2, heretofore marked for identification, was received in evidence.)

By Mr. Barlow:

Q. Mr. Young, in your experience in the box business, [17] which carries back beyond the 1920s, I would like to ask you if you ever encountered a box such as shown in the Rhodes patent, 1,430,029. A. I never came across it, but I have heard of it. Now, this is a very complicated hinge, and this, however, I believe does not open and close itself, it only springs in an open position. Usually they have to have a catch in the front to hold that down. That's held in an open position by having that "S" wire bent with that spring in it, and it only unbends one way.

Then also this hinge requires so many pieces, about six or seven pieces here, to accomplish something that is not very good.

Q. Would you mention those pieces in detail and tell how that is put together, please? A. Well, there is a three-quarter rim——

The Court: You are looking at figure 1, are you?

The Witness: Let's see—well, I would say figure 5 shows it much better. There is a three-quarter rim that goes outside of the box and goes into the box and held in place by some prongs.

The Court: That is called "c", is it?

The Witness: That is 6-b, I should think.

The Court: Well, we are both looking at the same——

The Witness: 6-d.

[18] The Court: I see, all right.

The Witness: Then through the outside of the box after the holes have been punched into the box there is a U-shaped piece that comes through the box, called "c", that comes through the box and the three-quarter rim, That goes through and shows these prongs upon which the hinge is fastened. Then by bending these prongs flat——

By Mr. Barlow:

Q. What is the hinge lettered? A. The hinge is lettered 1-b.

Q. Where is that located with respect to the vertical——

The Court: I wonder if that's right; would the hinge be 3-a, and 1-b one of the apertures?

The Witness: 1-b is the aperture, yes, and the hinge is "a" or 3-a. I guess the hinge is 3-a on this.

The Court: That's right. All right.

By Mr. Barlow:

Q. Where is that hinge located with respect to the vertical back wall of the box? A. That hinge is fastened on the inside of the vertical back wall.

Q. And how is it held? A. By means of the U-shaped piece, "c", coming through, forming the prongs and going through in the aper- [19] ture at 1-b.

Q. And is that all duplicated on the cover? A. That is duplicated on the cover.

Q. So you have duplicates of what you see in figure 5 in both the body and the cover of the box? A. Yes. And there are nine, as I see it—there are nine different pieces—ten different metal pieces required for this hinge.

Q. Do you know who owned this patent that you have just been speaking about, 1,430,029? A. Russell Rhodes of the Mason Box Company.

Q. Is he located up in the area in which you live? A. In Attleboro Falls, Massachusetts.

Q. That is close by where you operate? A. About five miles.

Q. Here is another patent of Russell I. Rhodes, No. 1,626,301, April 26, 1927. Have you ever encountered that structure? A. No, I haven't.

Q. In the trade? A. I'm friendly with the Mason Box Company. Russell Rhodes is now dead. I know Fred Hawkins up there. And in connection with my visit here in Washington, I called him up a few days ago and asked him if he could find one of these boxes, that I would like to take it to Washington. He said that [20] it never was successful, and he couldn't find one.

Q. Will you explain what the structure of that box is? A. Well, this particular hinge is a hinge that is bent at right angles. It's made in two parts and pinned together after the hinge is in the box. It has three prongs that go through the bottom of the box, and through the top of the cover.

One reason for this not being practical is the unsightly appearance that it would make on the top and bottom of the box.

Q. What sort of an appearance would it make? A. There would be holes through which these prongs would project and then these prongs would be pushed against the top and bottom of the box and have to be covered by a similar fabric that's on the box.

Q. And even though they were covered, would the covering be satisfactory? A. Well, it is not as good as a one-piece wrap, for the reason that laying an extra piece, an extra piece on top of the box, there is always a tendency of picking up on the corners or on the sides. Then if it is glued down solidly, it does show the prongs and the holes that the prongs came through underneath.

Q. Could you use that hinge on more than one depth [21] box? A. In order to change the depth of the boxes, you have to have new dies and make new hinges, each hinge for a certain depth box.

Q. Why is that? A. Because the bottom part lays against the bottom of the box and then it turns at right angles perpendicular in a vertical position, so that the hinge can be formed on the edges of the box and the cover.

> The Court: Well, I can see that. In other words, if one box is deeper than the other, you have got to have a deeper or wider hinge, or less, where the vertical part comes into play. All right.

By Mr. Barlow:

Q. Are the triangular plates of the hinge important in the strengthening of the box? A. In this particular hinge they would be for the reason that it is not fastened too well to the vertical side of the box, and of course it needs that right-angle bend in the hinge to make it stiff and straight.

Q. You were speaking about the prongs sticking through the bottom or top of the box, and it being necessary to cover those prongs with something. How about the necessity for covering the back wall of the box, either the vertical back wall of the cover or the vertical back wall [22] of the body of the box. Is it necessary to cover those, too? A. Well, it looks to me as though that projection number 10 went through between the box and the cover and was bent down so as to hold the hinge in better shape around the top edge of the box.

Q. Would that be then on the outside? A. That would then be on the outside of the box.

Q. Would it be necessary to cover that? A. To make it look well, it would have to be covered.

Q. Were there any prongs going through the vertical back wall designated 5 in figure 2? A. The only prong that would be there would be the one that went over the top ridge of the box, and it would have to be bent down.

Q. There are none that go through the back? A. None that go through the back wall.

Mr. Barlow: I believe the patents I refer to are going to be introduced by the defendant, is that right?

Mr. Schimmel: Yes.

By Mr. Barlow:

Q. Mr. Young, I show you another box construction, and will ask you if you will tell me what that is, sir. A. That is a box invented by Mr. Carpenter of the Babcock Company, and I think he has it patented. That [23] has a metal rim going around the box and around the cover.

Q. What is the material of the box and cover? A. The material of the box and cover is cardboard. This metal rim is inserted in the box and another one in the cover. And in this metal rim there are prongs died out so as to fasten the hinge into this box in the same manner in which it was fastened in the metal box.

Mr. Barlow: I would like to introduce this box just referred to as Plaintiff's Exhibit No. 3.

(Cardboard box containing metal rim was marked Plaintiff's Exhibit No. 3 and received in evidence.)

By Mr. Barlow:

Q. Mr. Young, I show you a metal rim and ask if you will state whether or not——

The Court: May I interrupt. When you speak about metal rims with reference to this particular exhibit, I assume there is a metal piece, as I would call it, underneath this fabric here?

Mr. Barlow: Yes, Your Honor. I was going to introduce a separate piece here in evidence to show that.

I will now introduce this metal rim which shows the metal part that goes around the four walls of Exhibit 3 in evidence as Plaintiff's Exhibit No. 4.

Mr. Schimmel: No objection.

[24] (The metal rim referred to was marked Plaintiff's Exhibit No. 4 and received in evidence.)

By Mr. Barlow:

Q. With those two structures, Mr. Young, will you continue to explain how the hinge is attached? A. This metal rim is fabricated and each one has to be made to the exact size of the box. A variation in the box size means a variation in the rim size, which makes it a bit complicated in regard to tools and manufacturing. This rim is placed inside of the cardboard box before the box is covered with paper. The covering machine covers the box and turns the paper down inside over this metal rim. Then it is only necessary to take the hinge and lay it over the prongs and bend the prongs down to form the hinge.

Q. Mr. Young, I show you another box, which I will ask to have marked for identification Plaintiff's Exhibit No. 5, and ask you to tell me what that is.

(Cardboard box with prongs was marked Plaintiff's Exhibit No. 5 for identification.)

A. This is a box that I made with a hinge that was sold to me by the Atlas Tool Company. It is a hinge composed of three different parts, a strip of metal for the box, a strip of metal for the cover, that have prongs that go through the cardboard side of the box and show through the back of the box. These prongs are bent down, fastening [25] these metal pieces to the box. These metal pieces also have prongs in the opposite direction. So that the regular standard hinge could be placed on the prongs and form the hinged box.

Mr. Barlow: I offer in evidence this box just referred to.

Mr. Schimmel: May I see that a moment.

Mr. Barlow: As Plaintiff's Exhibit No. 5.

Mr. Schimmel: No objection.

(Plaintiff's Exhibit No. 5, heretofore marked for identification, was received in evidence.)

By Mr. Barlow:

Q. Mr. Young, all of this that we have just been discussing occurred before the advent of your invention, did it? A. Yes.

Q. I show you a paper cut-out——

The Court: May I ask a question with reference to Plaintiff's Exhibit No. 5.

When you say, presumably, that this suffers from the same disability as the previous exhibit—in other words, you have to have a metal strip and the size of the metal strip will depend upon the nature and character of the box?

The Witness: Somewhat, although this metal strip can be used on all sizes of boxes. If the box was two inches [26] longer, that same hinge and metal strip could be used.

The Court: But you couldn't use a metal strip of that character on a box that's only, say, an inch and a half wide, like a ring box?

The Witness: No, the strip would have to be shorter.

The Court: It suffers from the same disability as all stripping of that character does. You have to make the strip to make the box.

The Witness: Yes, you do, if the box is smaller than that strip.

The Court: That would be more than one operation.

The Witness: That's several operations.

By Mr. Barlow:

Q. Mr. Young, all that we have said previous occurred before the advent of your invention, I believe you said? A. Yes.

Q. I hand you a slip of paper, which I will mark for identification as Exhibit 6, and ask if you will tell me what that is.

(Paper pattern of hinge with prongs, was marked Plaintiff's Exhibit No. 6 for identification.)

A. Mr. Ionarata of the Atlas Tool Company, had sold me a few of those hinges of his——

Q. That would be Exhibit No. 5. A. As in Exhibit 5. He was in my office, and I looked [27] this over. The Atlas Tool Company make tools mostly for the jewelry trade, tools and findings, and this was a new departure for him into a box hinge.

So I said to the Atlas Tool Company, "Why not make that all in one piece rather than have three pieces?" And I drew out and cut out with scissors and a razor blade a hinge that he could make, stating to him that it would only require one tool, because this hinge, being made onto one side, the same piece could be reversed and make the complete hinge. After he had rolled up part of it and put a needle through it, or a wire through it——

The Court: That's where I don't follow you. In other words, you say that this one particular piece that you have cut out makes the complete hinge. I can see where you run your needle through those apertures, presumably, designated on that exhibit, but how do you make a complete hinge out of that?

The Witness: Well, it requires two of these.

The Court: Placed in juxtaposition to each other?

The Witness: This one there, there, there (indicating) and you reverse it so one tool made both sides. Then I said to Mr. Ionarata, "Put your prongs right in the hinge itself; that will eliminate the two pieces of metal that you now have, which in my opinion are not necessary." I said to him, "I think we can get a patent on that."

[28] The Court: I am interested in why you said that. Why did you say you could get a patent on that, when he couldn't get a patent on Exhibit No. 5?

The Witness: Well, maybe he never thought about getting a patent.

The Court: You hold twelve patents?

The Witness: Yes.

The Court: And this is number 13 coming up?

The Witness: Probably.

The Court: So I want to know why, predicated on your experience, you think that you are going to get a patent on this.

The Witness: Well, for this reason, I think in my office that day was the first time that a hinge was thought of that could be put into a box in one piece without all these other pieces of metal going through to fasten the hinge on.

The Court: Let me ask you this question: Do you think, then, that this was a flash of, as the Supreme Court has said, of inventive genius, or do you think that unconsciously you thought back on your experience with reference to other hinges and drew from that experience?

The Witness: I don't think I looked back on the experience of other hinges, because there was none like it in this manner.

[29] The Court: If there never was a hinge, someone had to invent it some time. So as far as the hinge is concerned, you had to go back upon that experience of somebody else just the same as you had to go back on the experience of the man who invented the wheel, which has changed the world to a great extent. Somebody invented the wheel.

In any event, go ahead.

The Witness: So I said that I believe we can get a patent on that, and I applied for a patent, and I ordered some hinges like this from Mr. Ionarto.

The Court: This is Exhibit No. 7. You are offering this in evidence, are you?

Mr. Barlow: I offer in evidence this piece of paper cut out by the witness, as Plaintiff's Exhibit No. 6.

(Plaintiff's Exhibit No. 6, heretofore marked for identification, was received in evidence.)

The Court: And the model that goes with it.

Mr. Barlow: I offer the model, the metal hinge, which is very close to it, as Plaintiff's Exhibit No. 7.

(Hinge with prongs, marked Plaintiff's Exhibit No. 7 and received in evidence.)

The Witness: I ordered some hinges of the Atlas Tool Company with the agreement that they would sell these hinges to me exclusively, inasmuch as it was thought of in my office and I was applying for a patent. About two [30] months after that I happened to be in the Atlas Tool Company office and I saw a circular on the wall, of this particular hinge, in three or four different sizes. He was sending this circular out to all the box makers, because he was desirous of doing a big business in hinges.

The Court: Even though the hinge happen to be yours?

The Witness: Yes. I left his office and I was very much discouraged to see my idea being advertised in that manner, and I was discouraged, and I was very mad. And my patent was still pending, and I didn't know just what to do, but I was going to bide my time and then probably sue him.

The Court: Is there a lawsuit dependent on this?

The Witness: No, there isn't.

The Court: All right.

The Witness: I was very much upset and mad. And suddenly I thought of this hinge of mine and I knew that I had invented a hinge that was cheaper, better, more practical, better looking and stronger than any hinge that in my opinion could ever be invented for a box like that. And I had some tools made by the Fulford Manufacturing Company and applied it to a box and immediately applied for patent.

By Mr. Barlow:

Q. I hand you a hinge and I ask you if this hinge of [31] brass color is the hinge that you referred to as the one you suddenly thought of when you were disturbed about the Atlas Company circular. A. It is.

The Court: Exhibit No. 6 is the Atlas suggestion, enlarged upon and reformed by you?

The Witness: Yes.

The Court: And out of that experience came Exhibit No. 7?

Mr. Barlow: Came Exhibit No. 8.

The Court: Number 8, which is the hinge in question in this case.

(Sample of hinge in instant case, marked Plaintiff's Exhibit No. 8 and received in evidence.)

Mr. Barlow: I would like also to introduce in evidence as Plaintiff's——

The Court: Excuse me. Exhibit No. 6 and Exhibit No. 7, in order to get the record straight, is the suggested improvement of the so-called Atlas hinge?

The Witness: Yes.

Mr. Barlow: And Exhibit No. 8 is the Plaintiff's hinge which is in suit, and I would like to offer also as Exhibit No. 9 a box with that hinge, which is in this case, attached to it.

[32] (Box containing hinge in instant case, marked Plaintiff's Exhibit No. 9 and received in evidence.)

The Court: I understood you to say, or I understood counsel to say in his opening statement that this hinge was of a universal character, could be applied to practically any box. Well, of course, that is true as far as any hinge is concerned, but what I am driving at is this: You have to, if you want to put this hinge in a ring box, you have to cut the hinge in halves, you have to have a smaller hinge?

The Witness: Yes, I have cut the hinge down for smaller boxes.

The Court: You don't save anything as far as this alleged invention is concerned, as to universality—you can't apply it to every box? You can in principle, but not in fact.

The Witness: There are very few boxes that are hinged less than two, two and a half inches.

The Court: What about these little ring boxes?

The Witness: Then the same method can be used by cutting off the ends of my hinges.

The Court: They are a little bit smaller than two and a half inches, aren't they?

The Witness: I have cut mine down to an inch and a half.

The Court: And they manufacture a lot of them up around Attleboro and Providence, don't they—ring boxes?

The Witness: Mostly in Rochester.

The Court: In any event, they manufacture a lot of ring boxes?

The Witness: Ring boxes, but ring boxes have not been hinged with metal hinges.

The Court: No, but, query: Whether or not this advance you have come upon might possibly bring that about; what have they been hinged with, with sort of a fabricoid?

The Witness: Mostly cloth—silk, rayon.

The Court: Maybe there is no necessity for it, I don't know. All right.

The Witness: Most of the ring boxes today are made of plastic. There are very few of paper or cardboard——

The Court: You have answered my question.

By Mr. Barlow:

Q. Mr. Young, I would like to have you show us what was necessary in putting on the hinge, Exhibit 7, onto a pasteboard box. A. These previous hinges have required the inserting of a hole in both, or holes in both box and cover.

The Court: When you say these previous hinges, you are referring now to hinges used in the trade before and with particular reference to the so-called Atlas hinge?

[34] The Witness: Yes.

The Court: All right.

The Witness: The triangular prong is not strong enough to go through the cardboard without first making a hole. So that the cardboard, or the box, has to be perforated with holes for these prongs to be inserted.

Then when these prongs are inserted, they are pushed down parallel with the box and come out in this manner, which is unsightly and requires an extra piece of some kind of material to cover up that appearance.

Mr. Barlow: I would like to offer in evidence the two cardboard pieces with holes punched in them and without being hinged together.

(Two pieces of cardboard box, containing perforations, marked Plaintiff's Exhibit No. 10 and received in evidence.)

The Court: Do I understand you to say that the present state of the art with reference to boxes of this character, and the present use of hinges of the character depicted in Bicker, 1,461,175, and in the two Rhodes patents, 1,626,301, and 1,430,029, all result in the same way? In other words, with the use of either of the hinges depicted in those patents, you have a situation which develops as a result of their integration with the box which necessitates the pasting over on the side of the box of another piece of material to cover up the flanges or prongs or whatever [35] you want to call them?

The Witness: That's correct.

The Court: And it is your claim that your hinge has eliminated that particular aspect of the matter?

The Witness: It has.

Mr. Barlow: I don't think I offered in evidence the box with a hinge connecting the top and bottom, which will be Plaintiff's Exhibit No. 11. That is the one last referred to by the judge.

Mr. Schimmel: The hinge of Exhibit No. 7?

Mr. Barlow: Yes, that's right.

Mr. Schimmel: No objection.

(Box containing hinge similar to Plaintiff's Exhibit No. 7 was marked Plaintiff's Exhibit No. 11 and received in evidence.)

By Mr. Barlow:

Q. Mr. Young, we have here a series of boxes that compare the two hinges with the tabs attached or covering strips attached. Will you please explain what those are, taking first these cream-colored, alligator-type decorated boxes. A. This has to do with the hinge with the triangular prongs.

The Court: There are three boxes. For identification they are what—number 12?

[36] The Witness: A, B, and C.

(Box, with Exhibit No. 7-type hinge, uncovered was marked Plaintiff's Exhibit No. 12-A for identification.)

(Box with Exhibit No. 7-type hinge, covered, was marked Plaintiff's Exhibit No. 12-B for identification.)

(Box with Exhibit No. 8-type hinge, uncovered, was marked Plaintiff's Exhibit No. 12-C for identification.)

The Witness: Box A, the hinge has been applied, and it shows the prongs laid down parallel with the side of the box, which makes an unsightly appearance. To avoid this appearance you have to cover it with a similar material.

Now, this covering of this back, we have trouble in the sticking. It has unsightly bumps underneath the back piece. The corners and sometimes the sides are likely to be pulled up and makes the box look quite second-hand.

But with my hinge, when it goes in, it requires no backing, and its appearance is such that without the backing necessary, it's a lot cheaper, faster, and stronger.

Mr. Barlow: I offer in evidence the group of boxes just referred to by the witness as Plaintiff's Exhibit 12-A, the one with the hinge of Exhibit 7 attached and uncovered; as 12-B the hinge, Exhibit 7, covered; and as 12-C, Plaintiff's [37] hinge in suit, uncovered.

(Plaintiff's Exhibits Nos. 12-A, 12-B, and 12-C, heretofore marked for identification, were received in evidence.)

By Mr. Barlow:

Q. Will you please also refer to a similar group of plush-covered boxes which will be similarly marked Plaintiff's Exhibit 13-A, B, and C.

(Velvet-covered box with Exhibit No. 7-type hinge, uncovered, was marked Plaintiff's Exhibit No. 13-A for identification.)

(Velvet-covered box with Exhibit No. 7-type hinge, covered, was marked Plaintiff's Exhibit No. 13-B for identification.)

(Velvet-covered box with Exhibit No. 8-type hinge, uncovered, was marked Plaintiff's Exhibit No. 13-C for identification.)

The Witness: These are boxes made in the same manner, but they are covered with velvet. Velvet is much harder to stick a back to than paper or fabricoid. In the first exhibit, Exhibit A, it shows the prongs, and Exhibit B shows the back, which cannot be put on with good appearance, and Exhibit C shows my hinge that looks very well.

Mr. Barlow: These three boxes that were marked for identification I will ask be introduced in evidence as Plaintiff's Exhibit 13-A, showing the hinge of Exhibit 7 uncovered; 13-B, showing the hinge of Exhibit 7 covered; [38] and 13-C, the hinge of the invention in suit, uncovered.

(Plaintiff's Exhibits Nos. 13-A, 13-B, and 13-C, heretofore marked for identification, were received in evidence.)

By Mr. Barlow:

Q. Mr. Young, also for comparison purposes, I would like to show you these two cardboard exhibits and ask you if you will explain what those are. A. These are pieces of cardboard to show the workings of the two hinges. The Atlas Tool Company, still, with the holes and the triangular prongs. It is not fastened rigidly to the cardboard and only depends on the tension of these prongs resting against the cardboard. The holes are necessarily large for a matter of quick production, so as to leave a space so that the hinge can slide back and forth and does not make a very rigid contact.

My hinge, going into similar cardboard, without the use of holes, with prongs going in all directions, makes two parallel lines—the hinge and the cardboard, fastened together, practically their full length, which doubles the rigidity of the back of the box.

(Hinge of Exhibit No. 7 type, mounted on two pieces of cardboard, was marked Plaintiff's Exhibit No. 14 and received in evidence.)

(Hinge of Exhibit No. 8 type, mounted on two pieces of cardboard, was marked Plaintiff's Exhibit No. 15 and received in evidence.)

[39] The Court: I might say at this juncture that I see an improvement over both Rhodes and Bicker. I don't say it is an inventive improvement at this point. But I am rather interested to find out how the witness differentiates his use of the type of fastening from that used by Powell in patent number 2,206,918.

Mr. Barlow: I was going to come to that after I got this all in.

The Court: I can see an improvement, physical improvement, from observation and handling, with reference to the hinge designed by the witness over the hinges designed by both Rhodes and Bicker, I will be perfectly frank in saying.

The ultimate result of the manufactured box, and use of the hinge, is the saving of time and saving of material; in addition to that it is a better-appearing product.

So that you don't have to labor that point with me. Now the only question that naturally comes into the picture is whether or not the utilization of the idea is in Rhodes and Bicker, and the consequent result is such an improvement that it involves the use of the inventive faculty.

But I do observe from reading of the other patents cited, that probably that's the critical aspect of the matter.

[40] Mr. Schimmel: Of course, we have used both types, both patents, in the sense that they show this method of adhering the metal part to the cardboard piece, both by a single prong and by a plurality of prongs struck out from the base metal. They are both old in the art.

The Court: We are talking a little bit out of turn, so to speak, but I would say if you have a hinge, no matter how the hinge is fastened to the corresponding part, you still have a hinge. In other words, whether it is glued or whether it was fashioned by miracle adhesive, or whether it is screwed or whether it's nailed.

But here you have a situation where in this particular art the use of this particular type of box, for the purpose for which this type of box is used, you have two patents issued to Rhodes and one to Bicker, both depicting the same type of thing.

It is apparent to me that what the witness says, if it is not invention, it is certainly far superior to anything depicted by Bicker or by the two Rhodes. I categorically say so now. Whether it is an invention, that is a question of mixed fact and law.

However, I am a little bit curious about Powell. So I say this to you: I am not suggesting that you forego your proof, but I am letting you know what's in my mind now.

[41] Mr. Barlow: Your Honor, I would like to complete the record by putting in a few more, and then I will switch onto this Powell patent.

The Court: Don't let me swerve you off the track, because my experience with the patent bar is that they are the most meticulous and informed bar that we have, and you are all experts in your field, and I am not going to suggest that you do other than you are doing, but I am letting you know in advance, and I probably shouldn't, the way I am thinking.

Mr. Barlow: I am very pleased to have it.

By Mr. Barlow:

Q. Mr. Young, I want to ask you if you will explain what you did in going about the formation of this hinge that came to you in your difficulty, and I give you these three pieces to explain that with. A. Originally I had some tools made by the Fulford Manufacturing Company, to make me some hinges. Those hinges made in two different parts were a bit expensive; they were made in two different parts, just as the Atlas Tool Company made theirs in two different parts, and then put the pin through, combining the two parts to make the hinge.

Later on a firm in Milwaukee had these piano hinges in lengths of 36 inches, or to be manufactured in any length, [42] and they made for me flat hinges like this.

Mr. Barlow: Excuse me just a minute. We are not getting a record here.

The Court: Those are already in.

The Deputy Clerk: No, they have not been marked.

Mr. Barlow: I would like to introduce in evidence as Plaintiff's Exhibit 14, Exhibit 7 attached to two pieces of cardboard, and Exhibit 15, the hinge in suit attached to similar pieces of cardboard.

(Admission of Plaintiff's Exhibits Nos. 14 and 15 previously noted.)

Mr. Barlow: Also, for identification, plain piano-type hinge, as Plaintiff's Exhibit 16; a second hinge without the notch for the spring as Exhibit 17; and Plaintiff's hinge notched complete, as Exhibit 18.

(Piano-type hinge was marked Plaintiff's Exhibit No. 16 for identification.)

(Hinge minus notch for spring was marked Plaintiff's Exhibit No. 17 for identification.)

(Hinge notched complete was marked Plaintiff's Exhibit No. 18 for identification.)

The Witness: This firm in Milwaukee sold me——

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The Witness: This firm in Milwaukee sold me——

By Mr. Barlow:

Q. You say "this." Make that one 16. A. 16. —sold me number 16 hinge, made plain without punchings. And upon receipt of those hinges I put them [43] through two processes: First, dieing out the prongs with my own tools, and then dieing out the square piece that holds the spring.

Q. The prongs without the spring is Exhibit 17, and the one you last referred to as dieing out for the spring is Exhibit 18, is that correct? A. Dieing out for the spring, yes.

Now, the reason that I do this process myself is because that until the time that I get the patent, I didn't want anyone to have the set of tools for these hinges.

Now, in making this piano-type, using the piano-type hinge, and processing it myself, my cost is only 50 per cent——

The Court: You don't make the piano-type hinge; you buy that?

The Witness: I buy the piano-type and process it myself. And that cost is only 50 per cent of what the cost is of the other type hinges that die out two pieces and the necessity of putting a pin through.

The Court: You don't claim to have invented No. 17?

The Witness: No.

The Court: Or the method by which the two parts——

Mr. Barlow: That is 16, Your Honor.

The Court: Or the method by which the two parts of [44] metal in Exhibit No. 16 are put together to form a hinge?

The Witness: No.

The Court: So-called piano hinge. What do you claim specifically is your invention?

The Witness: My invention is that with these prongs, with these prongs inserted in the hinge in this manner, that it makes a hinge that is very economical, stronger, better looking, more practical.

The Court: And I understood you to say that what you have called here a plurality of projections, you refer to the plurality of projections with reference to the prongs?

The Witness: Yes.

The Court: And that's come about by the use of a special punch or machine of that character?

The Witness: Yes, by the use of a square punch.

Mr. Barlow: We were going to show you that punch, Your Honor, we have the tools here.

The Court: I just wanted to make absolutely certain, and I now have in mind as to what he claims he actually invented.

(Plaintiff's Exhibits Nos. 16, 17 and 18, heretofore marked for identification, were received in evidence.)

The Court: We will suspend for the morning recess.

(Short recess.)

[45] By Mr. Barlow:

Q. Mr. Young, you spoke of the cost being less in this new hinge that you thought of, from the first hinge that you thought of, with the prongs going through the box and requiring covering. Will you state what those comparative costs are and how they were made up? A. I think that first hinge that I showed to the Atlas Tool Company in my office probably is the cheapest hinge of all the other previous hinges, but my hinge will go in the boxes at a saving of $10.50 per thousand. That only means the application of the hinge, besides the lower cost of the hinge.

Q. Will you explain how that saving is brought about—the different items involved—please?

The Court: I can see one aspect of it—the necessary stripping that has to go on the back is eliminated.

The Witness: Yes. First it is the holes that go in for a dollar a thousand each. That is $2 a thousand. The application of this hinge would be $6.50 per thousand. The application of the back, the back piece, would be $7 a thousand, while ours goes in the box at $5 a thousand, or a saving of $10.50 per thousand.

By Mr. Barlow:

Q. Will you also please compare the strengths of the hinges such as shown by Exhibit 14 and Exhibit 15? [46] A. Because of looseness of the holes and the sharpness of these single prongs, and the single prongs, just the pressure of the prongs just pushing against the cardboard leaves it a little bit on the weak side.

Q. What exhibit is that one? A. That is number 14. While ours, number 15, is so enmeshed into the cardboard that it almost becomes one piece, but it does form two parallel lines that are fastened together in many places. Therefore, the bending qualities are not there that is in this hinge where one can move against the other.

Q. Would you bring out where that strength occurs in yours, such, for instance, as by the type of prongs that you have, or the number?

The Court: I think he has testified that in his exhibit, that is in the exhibit that relates to his hinge, that the hinge becomes so enmeshed with the fabric in which it is used, it comes practically in one piece, and as a consequence, it is to that extent more stable, and on the other exhibit—that is, the so-called Atlas hinge—he indicates that by use of the prong, and the type of prong, and the character of the prong, why, that stability and that integrity of the whole, so to speak, is missing, isn't that it?

The Witness: Yes.

[47] Mr. Barlow: The prongs extend in opposite directions in Exhibit 15 than they do in Exhibit 14. Did you bring that out?

The Witness: I think so. In the Atlas hinge, they only go one or two ways, while mine go in four different directions. And four different directions that are very close together. In these holes the prongs all bend out, in an outward direction. That goes then into the strongest part of the cardboard.

By Mr. Barlow:

Q. Now, Mr. Young, I show you a patent of Powell, 2,206,918, which is dated July 9, 1940, and ask you in a general way what is shown in that patent, particularly with reference to figure 3 in the upper right-hand corner of the drawing. A. In this one they endeavor to make a box that will ship in a flat manner. In order to get the corner of that box, they have applied this with a metal that we are very familiar with, and the customer can simply bend this metal up, forming the corner of the box.

Q. I show you a piece of metal, which I will identify as Plaintiff's Exhibit 19, and ask you if you will explain what that is.

(A metal reinforcement for box angles was marked Plaintiff's Exhibit No. 19 for identification.)

[48] A. This is a piece of metal that is used to fasten the corners of set-up boxes with metal.

Q. Will you explain what set-up boxes are? A. A set-up box is a box where the flanges are upright, and this is cut off automatically by a machine, bent over the corners of the box, and make a very strong stay; instead of using a paper stay, a cloth stay, this does make a metal stay.

My father has been dead for a little over thirty-one and a half years, and before he died he had a machine, and this same metal in his factory 15 or 20 years before he died. So this method of putting a corner on a box is very old.

The Court: Your conclusion is that the Patent Office shouldn't have given a patent to Powell in 1938? Your father made this thing fifteen years before he died, and he was dead 31 and a half years ago—in other words, that was known in the art for 46 years; yet the Patent Office gave a patent to Powell for the use of that particular type of prong, metal, back in 1938?

The Witness: Well, I haven't read this patent.

The Court: It says application made May 5, 1938; granted July 9, 1940.

Mr. Barlow: There is a little more claim to the patent than the applying of that strip. He has some sort of a [49] knock-down affair.

The Court: He has a flat box, but the critical aspect of it, now referring to the second column, line 51, "On either one or both sides of its median line it is provided with points or prongs p which may be driven into the paper board and clenched to a greater or less extent, as illustrated in figure 4, thus securing the stay element 17 against the outer surface of the bottom panel and end strips so that it extends across the fold crease d. As seen in Fig. 4, this fold crease preferably is made by displacing a narrow area of the sheet from the plane thereof in the direction away from the side to which the element 17 is applied."

Isn't that basically what you have devised, points or prongs which may be driven into the paper board, and clenched to a greater or lesser extent?

Mr. Barlow: Here is another old patent which shows that strip alone applied to both sides of the box.

The Court: Yes, I have seen that.

Mr. Barlow: That is 1,703,522.

The Court: But my question of the witness is this: Hasn't Powell devised the same method of clenching the metal to the fabric or the board as you have for the purpose of utilizing it for the use of a hinge?

The Witness: Powell was not interested in the hinge, [50] he was interested in fastening this metal piece to cardboard and making the corner of the box on the bottom the same as the corner on the box on the upright.

The Court: Apart from that, hasn't he devised the same method, basically? Hasn't he applied a piece of metal of the character that you hold in your hand to a piece of board, namely, cardboard, for the purpose of giving it greater stability, or for the purpose of utilizing it as a box, or any one of a half a dozen methods that he indicates?

But doesn't he, as I have said, on either one or both sides of the median line it is provided with points or prongs p which may be driven into the paper board and clenched to a greater or less extent, as illustrated in Fig. 4, thus securing the stay element——

Isn't that the situation here, what you have done? You have got prongs in a piece of metal in the form of a hinge, which you apply to cardboard for the purposes indicated.

The Witness: Well, I am applying my hinge in this, with this method, but, however, it becomes a hinge and not the corner of a box.

The Court: Well, I know, but the prongs are used in both instances. I asked you the question specifically as to what you claim you had invented, and you said—at [51] least I thought you said before we recessed—that what you invented was not the hinge but the method of applying the metal forming the hinge to the fabric container.

If you say that's your invention, and I think you have, then my question now is, hasn't Powell done

The Court: Your conclusion is that the Patent Office shouldn't have given a patent to Powell in 1938? Your father made this thing fifteen years before he died, and he was dead 31 and a half years ago—in other words, that was known in the art for 46 years; yet the Patent Office gave a patent to Powell for the use of that particular type of prong, metal, back in 1938?

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If you say that's your invention, and I think you have, then my question now is, hasn't Powell done the same thing? You have used it for a hinge, he has used it to strengthen the box or to make a box.

I don't want to put you on the spot, and I am not trying to. I want to get your explanation.

The Witness: Of course, I think Powell has less of an invention, although he may have had something.

The Court: Wait a minute. Powell has an invention, because they gave him a patent.

The Witness: The reason he did that was to save cardboard.

The Court: The reason you are doing it is to save cardboard?

The Witness: No, I don't save cardboard. Save time and make something better.

The Court: It all comes down to money, doesn't it?

The Witness: It does, with the exception that, one way of making a cardboard box and saving cardboard is to make it in a U-shape, and then put stays in. Therefore, you save the wasted board that is usual in what they call a cornered out board that throws away the corner that came out [52] of this.

In order to fasten this together, which was usually done with paper and glue, he has used the corner stay to make the corner edge of the box.

The Court: Whether you call it a corner stay or whether you call it any other kind of stay, isn't it a stay of a character that has provided, with the points or prongs which are driven into the box, for the purpose of lending stability to the stay?

The Witness: Yes, it does lend it stability.

Mr. Barlow: It isn't necessarily the stability. It certainly does grip it. But it is for attaching the corners of the box together.

The Court: That's right, but if there is no stability resulting, then the attachment is purely perfunctory and amounts to nothing.

Mr. Barlow: Surely the metal does make stability.

The Court: And that is the distinction made here with reference to these other hinges, isn't it, that by virtue of the utilization of these so-called prongs, you have a more stable hinge?

Mr. Barlow: Yes, we have a more stable hinge, that is true. Your answers are yes. I think there is a little more explanation to it, but your answers are yes.

The Court: I am coming back to the same thing I said before. I am satisfied it is an improvement over the pre- [53] vious art as depicted by Rhodes and Bicker, but I would like to see the distinction that you would make between what he has and what Powell had.

By Mr. Barlow:

Q. Mr. Young, this corner stay—I don't think I offered this in evidence.

Mr. Barlow: I would like to offer in evidence that piece of metal.

(Plaintiff's Exhibit 19, heretofore marked for identification, was received in evidence.)

The Court: I don't know that the Patent Office would go so far as to state that would be the critical aspect of the matter. Do you agree, or do you go along with the suggestion that there is an improvement over what has been depicted in the Rhodes and Bicker?

Mr. Schimmel: In the office there was no real issue raised as to that, Your Honor. Of course, that is part of your problem, as to whether or not this does show an improvement.

The Court: I am asking you now to express, with your customary frankness, as to whether or not you think that there is an improvement by virtue of the exhibits that have been offered in evidence here that we have had an opportunity to visually conclude one way or the other with respect to.

[54] Mr. Schimmel: May I be so bold as to say this; may I reserve an answer to that until I ask the witness a few questions?

The Court: All right.

By Mr. Barlow:

Q. Mr. Young, this Exhibit 19 is applied to, we will say, the corner of a box, to attach the corners together when the flanges are folded up. Where is it applied with reference to the box, outside or inside? A. It is applied on the outside.

Q. Always applied on the outside? A. Yes, it is.

Q. Is it ever possible to apply a spring hinge to the outside walls of a box? A. No.

Q. Have you ever seen this strip, Exhibit 19, applied to a box in such a manner that there was ever any flexing to take place of the parts of the metal strip? A. No.

Q. It was always for rigid construction? A. Rigid construction.

The Court: In other words, what you are saying is that that particular piece, or any part of it, could not be used as a hinge.

The Witness: It couldn't be, no. Can I explain this [55] a little bit further?

The Court: I was wondering whether counsel was through. Let's find out whether counsel had finished interrogation. It is my fault for throwing this business out of its orderly, or orthodox, procedure.

By Mr. Barlow:

Q. You go ahead and explain . A. This is evidently a coca-cola box.

The Court: You are talking about the Powell patent?

The Witness: The bottles are placed in here, probably six of them, three on each side.

The Court: Referring to figure 1?

The Witness: Figure 1. The bottles are placed in here, evidnetly three on a side, or two on a side, and the center part, of course, is the handle for carrying home. This angle-iron here that we usually put on the corner is put on there for rigid strength. That comes up a short way so that these bottles can be put in.

The Court: When you say angle-iron, you are referring to the type of angle-iron as is indicated in Exhibit No. 19?

The Witness: Yes. When that is bent a 90-degree angle, of course that is very stiff.

Now, without some other means, they have to have something quite stiff in there, and this angle really makes that stiffness. One that has been bent in that particular [56] position, why, it is not ever bent back again.

By Mr. Barlow:

Q. Suppose it was bent back and forth, what would happen? A. It would break.

The Court: That comes down to what I asked you a minute ago. It has never been used as a hinge.

The Witness: No, it wouldn't.

By Mr. Barlow:

Q. Mr. Young, you have had in the factories in which you have been employed the machine for putting on this strip, Exhibit 19, as a corner stay for a box, for over thirty years? A. Well over thirty years. It must be forty or more.

Q. And it never occurred to you before to use that sort of an opening with prongs about it, to attach a hinge? A. No, it didn't.

Q. Did you ever see any other hinge attached by use of openings with prongs about the openings? A. Yes, I have.

Q. Where? A. One was Lucien Lelong, in Chicago.

Q. That was after the advent— A. That was two years after.

[57] Q. Will you tell me what you refer to in that connection? A. I had a customer in Chicago, Lucien Lelong, who used my hinge, and liked it very much.

Q. Which hinge was that? A. That's my hinge.

The Court: The one in controversy here?

The Witness: Yes. They liked it very well, and one of my competitors in Chicago wanted to quote on it. And Lucien Lelong gave this competitor my box for them to quote on it. I didn't know anything about it until I made a visit to Lucien Lelong, and they said, "Well, we can buy that for about two cents cheaper than your price, right here in town."

I said "I don't see how they got the hinge."

He said, "Well, here it is, right here. Here is the sample they submitted."

I took the sample and I said they couldn't have copied it more exact, and it looks exactly like mine, and this man——

Mr. Schimmel: Your Honor, may I ask to have this matter stricken. I see that it has no materiality in relation to the question.

The Court: We are not trying an infringement case.

Mr. Barlow: No, but I think the evidence of people copying——

[58] The Court: Why not proffer it for that purpose, without going into the whole business of what was said?

In other words, you went to Chicago, you had a customer in Chicago, you finally found that the customer was buying your hinge on other boxes at less than what you could sell them for.

The Witness: This particular sample was made with my hinge, that he took out of my box, that he submitted to his customer.

Mr. Schimmel: That is all irrelevant and immaterial.

The Court: I just want to have the record straight. In other words, what I understand you to say now is that they didn't manufacture your hinge, they took a hinge out of your box and put it on the sample?

The Witness: On the sample, yes, and received an order for ten thousand pieces. Then they ordered ten thousand hinges from A. Ludwig in New York, A. Ludwig, the biggest——

The Court: All right. Your hinge is being pirated at the present time.

The Witness: It is.

By Mr. Barlow:

Q. Is that a specimen of what A. Ludwig made up?

The Court: I am assuming this is merely being offered, evidence of this character, to show that the trade of the [59] industry regarded his hinge as an improvement?

Mr. Barlow: That is correct.

The Court: All right. We will stop right there on that.

Mr. Barlow: You mean you don't want to receive evidence on that?

The Court: I have received the evidence, but I don't want to go into detail with respect to it.

By Mr. Barlow:

Q. That is a specimen of what Ludwig— A. Yes, this is the Ludwig hinge.

Q. How did you get ahold of that Ludwig hinge?

The Court: No.

Mr. Barlow: I offer in evidence this Ludwig hinge as Plaintiff's Exhibit 20.

(A. Ludwig hinge was marked Plaintiff's Exhibit No. 20 and received in evidence.)

By Mr. Barlow:

Q. How did you get ahold of that Ludwig hinge?

Mr. Schimmel: Isn't this going exactly contrary to your ruling?

The Court: I indicated I didn't want to go into detail. I am going to assume, as I said, to me, not even as a neophyte, but completely outside the field of any knowledge with reference to this industry or trade, that on [60] the basis of the exhibits already in evidence, I would conclude that the hinge in question is an improvement over both the Rhodes depictions and the Rhodes patents, and in the Bicker.

Mr. Barlow: I would like to offer one more.

The Court: I just hadn't finished. I wanted to indicate for the record what my views were.

So, therefore, as a consequence, I will conclude that in the absence of anything in the nature of a proprietorship nailed down, so to speak, that anybody in the trade who saw that hinge would appropriate it, if it was laying around loose, and so therefore, outside of the indications already given, I don't think you have to go into detail.

What you have to do, however, is to convince me that with reference to the patent, the Powell, and what he depicts, that there hasn't been a utilization by the witness of the Powell disclosure in a hinge. Now, if there has, then it is no invention. If there hasn't, then he's got something.

By Mr. Barlow:

Q. I might ask you, Mr. Young, if prior to your thought of using an opening with prongs about it, you ever knew of that structure used for attaching a hinge to a box. A. It never was.

Q. You never knew of it? [61] A. No.

The Court: It was, because Powell has done it, but as far as you know——

Mr. Barlow: Powell isn't a hinge.

The Witness: Powell utilizes it as an angle-iron.

The Court: Do you manufacture this type of product depicted in Powell? In other words, do you manufacture other boxes than those——

The Witness: Yes, I do, I manufacture this type of box, with that same——

The Court: He is now referring, Mr. Reporter, to the so-called Escobales patent, February 26, 1929, 1,703,522. It is not in evidence, is it?

Mr. Barlow: I will put it in evidence as Plaintiff's Exhibit No. 21.

(H. Escobales patent No. 1,703,522, was marked Plaintiff's Exhibit No. 21 and received in evidence.)

The Court: That refers to a metal stay and method of making the same. All right.

The Witness: This is also a metal stay, and forms an angle-iron.

By Mr. Barlow:

Q. The manner in which you have been familiar with that metal stay used as an angle-iron is shown in this patent 1,703,522, is it? [62] A. Yes.

Q. I would like to ask you on this question of infringement, what this box is. A. This is a box for the American Safety Razor Company, who had me rush by air mail two samples down to a meeting of theirs, and they were going to give me an order for a hundred thousand. They found someone in New York that they gave the order to, and that constituted an infringement upon my idea.

Mr. Barlow: I offer in evidence this box as Plaintiff's Exhibit No. 22.

Mr. Schimmel: I object.

The Court: I will exclude it, because I don't want to go into the question of infringement. It isn't before me. I have indicated my view with respect to the matter. I will assume that the idea is being pirated at the present time in the trade.

Mr. Fisher: Your Honor, if I may interject a word here: We would like to establish in this case that this was not obvious, to take the fastening for the metal stay and apply it to a hinge; and further, after the plaintiff here got the idea of fastening a metal hinge in that manner, it then was taken up by the trade. In other words, to establish in effect a long-felt want for this type of fastening.

[63] The Court: I say I agree with you. I agree that it has been an improvement, and the trade has recognized it as such, and that there has been a pirating of his idea. I will admit that for the purposes of the record.

But I do say, Mr. Fisher, that what you have got to convince me of is that there hasn't been a utilization of the idea of Powell with respect to the prongs, which I understand the witness claims is the critical aspect of his alleged invention, because the type of prong is of such a character, with the prongs themselves going off at various angles, that it lends greater stability to the hinge, and practically incorporates the hinge with the box in contradistinction to what the previous experience in the trade has been.

If I can conclude that he is not a mere routineer, or one working in the art and would utilize the idea of Powell either unconsciously or otherwise—and certainly otherwise is not in the picture here—then he has invented something, because the reaction of the trade indicates that it is utile.

On the other hand, if I conclude that the idea came from Powell, then there wasn't an invention as the courts have defined that term, and he is out of court.

Mr. Fisher: We appreciate that, and we accept your ruling, the acknowledgment that this was accepted by the trade.

[64] The Court: Yes.

Mr. Fisher: But that is an item, we feel, in determining whether or not the application of the old fastening means of Powell to a hinge, involved invention.

The Court: Well, I say I will assume that for the record, without going into the details. In other words, I will say categorically, as the Court before whom this matter is now being tried, that to me it appears to be a decided improvement over past performance; also of similar individuals engaged in the same business. But the critical aspect has got to be——

The Witness: Can I say this, Your Honor: I never heard of Powell until lately, but I did have this, of course.

By Mr. Barlow:

Q. "That", that you just referred to, is Exhibit No. 19? A. Yes.

The Court: You are on second base at the present time.

By Mr. Barlow:

Q. Mr. Young, does this type of hinge that we have referred to as your hinge of this invention, such as Exhibit 18, have applications in other ways than on a box such as shown in the application? A. My hinge is the only hinge that will make a box [65] that is hinged in that manner.

Q. And you are now referring to a box which I will identify as Plaintiff's Exhibit 23.

(A box, "Cara Nome," was marked Plaintiff's Exhibit No. 23 for identification.)

Q. Will you explain that a little more, please. A. For one reason, you can't get inside of this with the die that is going to make any holes, and by putting this box on the form, a flat form with my hinge under it, when the press comes down, it fastens that hinge so that I get that result.

Mr. Barlow: I offer in evidence the box just referred to by the witness as Plaintiff's Exhibit 23.

(Plaintiff's Exhibit No. 23, heretofore marked for identification, was received in evidence.)

The Witness: This is another.

The Court: What sort of a box is this?

The Witness: That is a display box. That can easily stand up.

Mr. Barlow: This one is Exhibit 24 you are now referring to.

(A box, Douglas Young, Inc., square in shape, was marked Plaintiff's Exhibit No. 24 for identification.)

The Witness: This is another form of display box.

Mr. Barlow: Just a minute. I will offer in evidence [66] the box just referred to by the witness as Plaintiff's Exhibit No. 24, marked Douglas Young, Inc.

(Plaintiff's Exhibit No. 24, heretofore marked for identification, was received in evidence.)

The Witness: That is a box by itself being used with the hinge.

Mr. Barlow: And another box, Plaintiff's Exhibit No. 25.

(A box, Douglas Young, Inc., was marked Plaintiff's Exhibit No. 25 and received in evidence.)

Mr. Barlow: You may examine.

Cross examination by Mr. Schimmel:

Q. Just a few questions I want clarified for myself and the Court: In connection with your description of the triangular type of projection that was used to form the hinge, I believe you stated that holes had to be placed in the box part first, before the hinge was put on? A. Yes.

Q. Couldn't those have been forced in without putting the holes in? A. I don't think so.

Q. Do you remember whether the Bicker patent said that the holes had to be formed in putting his hinge in first in the cardboard box? [67] A. I don't know whether the——

Q. May I ask you this: Isn't this Bicker prong projection similar to what you were talking about as yours having been an improvement over? A. Yes.

Q. Now, you know whether Bicker said he had to put the hole in first, or whether he just forced it in? A. Well, I think they must have made the hole first, because this prong has a flat surface to bend on, where ours has a circular surface. And that circular surface gives it an added strength so as to pierce the cardboard. He would have a great deal of difficulty putting this on without first making the holes.

Q. May I refer you to page 1 of that patent, second column, beginning at line 87, paragraph beginning, "By impact," and ask you to read that and see if your answer would still be the same. A. "By impact the teeth 9 and 10 are then driven through the wall of the can on each side of the seam and clenched so as to serve to reinforce the seam as well as to hold the margin of the can for a length corresponding with a length comprehending the hinge elements so that there will be a minimum of annoyance of scrapping of material incident to inoperative assemblages by nonaligned hinge elements, and to cause the relatively hinged members to [68] freely articulate."

Q. Is there any indication there that you drive holes first? A. Well, maybe not, although this does not form a hinge, it only forms one member where a cover comes down and clinches onto this particular piece of metal.

Q. In so far as fastening that hinge member to the cardboard container, he doesn't indicate, does he—— A. He doesn't. I think he would have a lot of difficulty.

Q. But if you drove it in by impact, wouldn't you have a tighter connection than you would if you bored the hole first? A. Yes, you wouldn't have the looseness of the hole, of course.

Q. That's one of the objections, I believe, you stated with respect to the prior art, that there was a loose connection there. This would eliminate, if you drive that in, you would eliminate that looseness, wouldn't you? A. Yes. Although I think—we have never been successful in driving triangular pieces through cardboard.

Q. Considering these triangular pieces again, as you have shown in the exhibits here, is there a difference in the length of those triangular pieces, triangular pro- [69] jections, that could be used to form, or to fasten the two parts together? A. The die could be made of different lengths.

Q. What I have specifically in mind is this: Considering Plaintiff's Exhibit 12-A, you showed a box with projections, large projections protruding through the back of the box. Could those projections be made smaller and still function to hold that hinge to the box? A. I don't think so.

Q. It's your opinion, then, that they would have to come through that far in order to function? A. I think so, yes.

The Court: I think that we will recess a little bit earlier today than we ordinarily would.

Let me ask you this question: You have how many more witnesses, Mr. Barlow?

Mr. Barlow: Two, Your Honor.

The Court: I am asking you this: I don't want to give you the impression I am trying to rush you; I am not. But I have this other case that is coming along.

Mr. Barlow: The other two witnesses should be a lot shorter.

The Court: You take your time. You try your case in your way, but be back at one forty-five or one-fifty.

(Thereupon, at 12:10 p. m., the luncheon recess was taken.)

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[70] AFTERNOON SESSION

(The hearing was resumed at 1:55 o'clock, p. m.)

LEWIS DOUGLAS YOUNG resumed the stand and testified further as follows:

Cross examination (Resumed) by Mr. Schimmel:

Q. Mr. Young, I have here the Plaintiff's Exhibit 12-A, and Plaintiff's Exhibit 12-C. Is it true with respect to the hinges in these exhibits, the only mechanical difference is the use of a multi-pronged projection for affixing the hinge to the back of the box? A. Well, virtually that's the only difference, but there is a slight difference in the course of the make-up of the hinge. My hinge goes way across for the full length. This one is a little shorter.

Q. But the real difference that you claim as your invention, isn't it the use of the multi-pronged projections for attaching the hinge to the cardboard box? A. Yes.

Q. And isn't it true that that multi-pronged attaching means—means for attaching metal to cardboard—is shown in the Powell patent? A. Yes, but the Powell patent forms an angle-iron and not a hinge.

Q. In so far as the attaching means is concerned, isn't the same multi-pronged projection— A. The attaching is the same.

[71] Q. In connection with the box to which the hinge of your invention is attached, is it true that these boxes are sold always without covering material? A. By the covering material.

Q. Exterior covering material? A. I have never seen one without covering material.

Q. In other words, it is as a usual thing to cover those boxes with fabric, velvet, paper, anything of that sort? A. Yes.

Q. When that covering material is used on this box, is there any discernible difference between the hinges of the two exhibits, 12-A and 12-C, when covering material is put on those? A. I would say there was quite a difference. In the first place, with Exhibit B, it has an unsightly appearance on the back. The hinge is not as strong. It is necessary to make the holes and the holes show also.

And with Exhibit C there is no necessity for the holes; it gives a nice, smooth back; there is no necessity of any covering to cover up that unsightly appearance, and the hinge itself is much stronger.

Q. Is that covering material placed on those boxes as you have them in your hand now, to cover up the projections that come through the back? [72] A. There is no covering material on it now.

Q. I mean when covering material is placed on it, how is that covering material put on the boxes? A. Like this (indicating exhibit).

Mr. Barlow: Do you want to identify what he is looking at.

The Court: The question was directed to Plaintiff's Exhibit No. 12-A, 12-B, and 12-C.

The Witness: It is 12-A that I was talking about.

By Mr. Schimmel:

Q. Looking at Plaintiff's Exhibits 13-B and 13-C, are they the boxes that exhibits 12-B and 12-C were, with an exterior velvet covering? A. They are.

Q. Now, closing those boxes, is there any discernible difference in connection with the hinges that would be manifest to one ordinary person who would be buying those boxes? A. Yes, there is. In this box, which is marked 13-B, the box is not as strong, because it only has the four holes with the projections going through. It has become necessary, on account of the unsightly appearance, to place a back on the back side of the box, while in ours, 13-C, there is no back necessary, there is no peeling up, no danger of the peeling up of the backs, the same as shown [73] in 13-B, and with a saving of $10.50 per thousand.

Q. Were those two covered in exactly the same way? A. They were.

Q. Is this outer layer that is peeling in Exhibit B, because of the lack of mechanical strength? A. With this one it's impossible to peel with this model 13-C; it's impossible to peel because there is no back on there to peel.

Q. I asked you whether they were both covered in exactly the same way. A. They are covered in exactly the same way up to the point of putting the back on.

Q. Which back are you referring to? A. The back that covers up the unsightly appearance.

Q. Do I gather, then, from what you say, that this Exhibit C has no velvet back, is that what you are speaking of? A. Has no velvet back.

Q. And there is a velvet back to Exhibit B? A. There is.

Q. They both show a velvet appearance, don't they? A. Yes, but this is velvet all the way through. There is velvet placed on top of that. These boxes are all made up originally just alike. This 13-A is one without the back. Now we take a back and we place it on top of this to [74] cover up that unsightly appearance.

> The Court: When you say on top of this, you are referring to 13-A?
>
> The Witness: Yes. Which requires extra labor, an unsatisfactory box, while in this 13-C, it requires no extra labor, no extra piece, and looks much more finished.

By Mr. Schimmel:

Q. Looking at Exhibit 13-A, were those projections put on there after the velvet covering was put on, or before? A. Those are put on after the velvet covering was put on.

Q. My question was directed to you with respect to affixing the hinges by means of those projections prior to putting on the velvet covering. They wouldn't show then, would they? A. You couldn't put the velvet covering on after the hinge was on.

Q. Are all the hinges put on that way? A. All the hinges are put on this way.

Q. The velvet covering has— A. Has to be on first.

Q. First, before the hinges are attached? A. Yes.

Q. I didn't get that from your testimony previous, sir.

> [75] Mr. Schimmel: I believe that's all I have, Your Honor.

Re-direct examination by Mr. Barlow:

Q. Mr. Young, will you please explain a little further as to this covering that is put on the box, as to why it has to be put on before the hinge is applied? A. Well, the box has to be made, and the machines that make these boxes cannot cover the boxes with the hinge already applied, because that cloth, as you see, turns in before the hinge is applied to the box.

Q. That is because of the mechanics of the machine that make it necessary to apply that covering before the hinge is applied? A. Yes.

Q. You can't open a box through more than 90 degrees, and therefore, you can't get that machine in there? A. That, and also, in covering the box with cloth, the cloth would come over the hinge, which wouldn't work out, because before the box is covered, there wouldn't be any box to hinge. This is made virtually from a flat piece of board. It goes on to a machine and builds it up into that shape.

The Court: Are they covered by machinery, too?
The Witness: Covered by machinery, yes.

By Mr. Barlow:

[76] Q. And that is true also of these boxes, 12-A, B, and C? A. It is, yes.

Q. And when you are referring to a covering on the box, you are referring to the covering all about the surface of the box such as it appears in 12-A and 12-C? A. Yes. That's what we call the covering, while the extra piece is put on to hide this bad appearance, is called the back—backing.

Q. That is shown in 12-B? A. Yes, that's the backing.

Q. Do you sometimes have trouble with that backing sticking to some of the coverings? A. We do, yes.

The Court: Are those put on by hand?
The Witness: These are put on by hand.

By Mr. Barlow:

Q. That is, that backing is put on by hand? A. This Exhibit 12-B is fabricoid and it is hard to find a glue that will stick fabricoid to fabricoid. We have a lot of trouble sticking that down. This Exhibit 13-B is not too satisfactory, because you are sticking a back to a pile of velvet that has no solid surface, and that usually makes a poor job.

Q. Mr. Young, you were also interrogated about the Bicker patent, 1,461,175, and in that connection you were [77] asked if the prongs were driven through. Can you tell me what would be necessary for prongs such as are shown there, if they were to be driven through? A. If these prongs were driven through, it would have to be out of stock that is much heavier, so that those prongs would not bend out of shape as they went through the cardboard. Now, my prongs are——

Q. Much heavier than what? A. Much heavier than what I would use.

Q. Or what is used on any of the boxes? A. On any of these boxes. Now, my prongs have a circular shape, and that gives a much stronger prong going through.

Q. Could that structure such as shown in Bicker be used for a spring-actuated hinge or cover? A. I don't think that prongs of this nature would be strong enough to make a satisfactory hinge, considering the immense spring pressure that comes on the sides of the box and also in the prying when the box is open with a strong spring on the inside.

Q. Is there actually shown in that Bicker patent a hinge? A. This is not a hinge. This is a piece of metal that is fastened evidently to a box, and the cover is so constructed that it comes down and grips this piece of [78] metal, which might have a hinge action or a fastening of the cover to the box.

Q. Where is that place such as shown in figure 4—position with reference to the wall of the box? Is it inside or outside? A. No, it is on the outside.

Q. Could a spring in any way be applied to— A. A spring hinge could not be put on the outside. It has to be on the inside.

Q. Mr. Young, has there ever been submitted to you any machines for putting on hinges of the type which are here in suit? A. I heard of a man named Augat in Attleboro that had a machine that would put on hinges, and I was advised to go and see him. I saw Mr. Augat and he had four machines ready for delivery. None had been sold. These machines he demonstrated to me were putting on my hinge, a hinge that was made by the Atlas Tool Company. That was my first knowledge that Atlas Tool Company had gone from this hinge that I drew out for him with the triangular prongs to my hinge made almost exactly as my hinge was made.

Q. By your hinge, you have reference to Exhibit 18? A. Exhibit 18, yes. He had four machines ready for delivery, unsold. I received a telephone message from him two or three weeks after that, and he said that he had sold [79] the four machines and he was putting through another batch. He would like to know if I would like to place an order for one of the machines. He was going to make seven more, that he had been contacted by thirteen people to buy this machine.

Q. That machine was for what? A. This machine was for stamping on the hinge into the box.

Q. The hinge such as Exhibit 18? A. Exhibit 18.

Mr. Barlow: That is all.
Mr. Schimmel: I have no further questions.

(The witness stepped down.)

Mr. Barlow: Mr. Thurston.

Thereupon BENJAMIN L. THURSTON was called as a witness, and being first duly sworn, was examined and testified as follows:

Direct examination by Mr. Barlow:

Q. Will you please state your full name, age, residence, and occupation. A. I am Benjamin L. Thurston, 22 Kenilworth Way, Pawtucket, Rhode Island. I am forty-nine years old, and I am employed by the Frost Box Company of Pawtucket.

Q. What office do you hold in the Frost Box Company? [80] A. Treasurer.

Q. What is the business of the Frost Box Company? A. Frost Box Company manufactures set-up boxes for the jewelry industry and allied industry.

Q. Of what material are they made? A. Made of cardboard and paper and fabrics.

Q. How long has the Frost Box Company been in business? A. Established in 1868.

Q. How long have you been with the Frost Box Company? A. Twenty-five years.

Q. Are you familiar with the procedure of manufacturing paper boxes for the market? A. I am.

Q. I show you a box marked Plaintiff's Exhibit 11 and ask you if you are familiar with the manufacture of a box of that character. A. Yes, we make a box just like that.

Q. Where do you get the hinges? A. The Atlas Tool Company.

Q. Will you state in a general way what's necessary to apply that hinge shown in Exhibit 11 to the box, and if you wish, you may refer to these exhibits.

Mr. Schimmel: Your Honor, I object to this witness testifying to expert matters of which, as treasurer, as I [81] understand he is, he is not qualified.

Mr. Barlow: He said he was familiar.

The Court: He has been twenty-four years with the company, and I am assuming you didn't start in as treasurer, did you?

The Witness: That's right.

The Court: You are forty-nine?

The Witness: Yes.

The Court: So by calculation, you must have started in at twenty-five. What capacity did you start in there?

The Witness: I started in as a salesman, and then I went inside the factory as superintendent.

The Court: Superintendent of what?

The Witness: Of the manufacturing.

The Court: All right.

The Witness: This box, marked Exhibit No. 10, is the first step in applying this spring hinge after the box is made, that first step being punching out the two parts, or shooks, to enable the prongs of the hinge to go through the back of the box.

The Court: That's a machine operation, is it?

The Witness: That's a press operation, a punching press.

Each one of these parts has to be punched separately, one at a time. After they are punched, the spring hinge is [82] placed on the anvil and then two shooks are taken and placed over the prongs in the hinge in this manner, and the head of the press comes down and turns over the prongs on the hinge, and fastens it to the box.

The Court: Is this all one continuing operation on a sort of beltline type of machine, or are there two separate machines?

The Witness: There are two separate machines, the machine that you punch the two parts with is a cutting press, and the machine that you apply the hinge with——

The Court: Then the boxes in which the so-called shooks, or holes are placed, that is, the two sides, must be taken off the first machine and then carried or transported on a conveyor belt over to the other machine?

The Witness: That's right. Up to that point we have the box set up with the hinge on.

The Court: I take it, too, that you agree with Mr. Young in this aspect of his testimony, that in the meantime, however, the box has been covered with a fabricoid or whatever it happens to be covered with.

The Witness: It is machined first.

By Mr. Barlow:

Q. Machine covered? A. Machine covered, yes.

Q. Would there be any way of covering the box after [83] the hinge is applied? A. Not with any equipment that has been made up to now, that I know of.

The Court: Would that be the preferable way to do it?

The Witness: Yes, it is an automatic machine.

The Court: Would it be better to do it after the box was finished, rather than the way you are doing it now?

The Witness: I wouldn't think so, in view of all the operations in the manufacturing of paper boxes, relative one to the other. It would seem rather a clumsy and impractical way to try and cover a box after the two pieces are put together.

The Court: In other words, from your experience in manufacturing this type of container, that is the best way that has appeared up to now?

The Witness: That's correct. And then, of course, this box in our opinion is not finished now. It is simply hinged up to this point.

The Court: You have to put a piece of fabricoid over the top.

The Witness: Yes.

The Court: That is another operation.
The Witness: That is another operation.

By Mr. Barlow:

Q. In boxes that you have made, such as this Exhibit [84] No. 11, do you always put a piece of fabricoid or some sort of material over those spurs that are on the outside? A. Yes, always.

The Court: You do that by machine?

The Witness: No, it has to be a hand operation. The glueing operation is done by a glueing machine, but the back has to be picked up by a girl and placed over the edge and rubbed down.

By Mr. Barlow:

Q. At some time or other did there come to your attention a hinge on a box such as I show you now? We will call it for identification Plaintiff's Exhibit No. 26.

(Atlas Tool Co. hinged velvet covered box, marked Plaintiff's Exhibit No. 26 for identification.)

A. Yes. This hinge that we have been talking about in Exhibit No. 11 is a hinge that we are using in our factory now and selling to the trade. This hinge, No. 26, was shown to us by the Atlas Tool Company, who we purchased this pronged hinge from, and we accepted it as an improvement and a much more practical hinge than the one we are using, and had some samples made up, and anticipated going into the manufacture of this box.

Q. Is that one of those samples that you have in your hand? [85] A. This is a box that Atlas hinged for me that I intended to sample.

The Court: When did you find out that this in effect was not Atlas' hinge?

The Witness: Well, soon after we got ahold of that hinge and started to sample it—and, incidentally, I worked with Mr. Barlow recently on another type of patent in the paper box business——

The Court: You mean you got another hinge coming up sooner or later?

The Witness: No, this thing I was working on happened not to be a hinge. And he asked me about this thing, apparently was interested, and I gave him what information I had, and then after we had gotten into the conversation a little while he told me what was happening on this hinge. And when I found out what was going on, why, I stopped making samples with the idea that I wasn't anxious to stimulate business if I couldn't follow through with it.

Mr. Barlow: I would like to introduce this in evidence as Plaintiff's Exhibit 26.

(Plaintiff's Exhibit No. 26, heretofore marked for identification, was received in evidence.)

The Court: As an expert in the business of manufacturing boxes and containers of this character, and having [86] in mind your familiarity over twenty-five years of experience with hinges and other apparatus of a similar character in relation to boxes of the kind that we have under discussion here, would you say that this is an improvement over what your past experience has been in relation to the same thing?

The Witness: It definitely is.

The Court: Do you say that this is an improvement of the character that all of those engaged in a similar business would presumably adopt this type of hinge?

The Witness: I have no doubt but what every boxmaker will use it.

The Court: Most of the boxmaking companies are more or less concentrated in that area of New England?

The Witness: Yes.

The Court: Where is the Dennison Company, Framingham, Massachusetts?

The Witness: Yes.

The Court: They are a large competitor of yours?

The Witness: Yes, they are.

By Mr. Barlow:

Q. You are a direct competitor of Mr. Young, are you not? A. Yes.

The Court: You don't go into the over-all paper [87] products that Dennison does, though?

The Witness: We don't manufacture paper. We convert paper and cardboard and other products into packages.

By Mr. Barlow:

Q. Mr. Thurston, you said that you had sampled this box and then you learned that Mr. Young was trying to get a patent on it. Did you then withdraw it from sampling? A. Yes, we stopped right there.

Q. Why did you do that?

The Court: I assume, even though he is friendly with Mr. Young, he didn't want to get involved.

The Witness: I didn't want to get involved with it, I didn't want to spend salesmen's time introducing an item that I thought without a doubt either Mr. Young had a patent or would have one on, and another thing, if we went into the manufacture of this hinge, we would have purchased one of those Augat machines that came out in the other testimony.

The Court: Where is Atlas located?

The Witness: In Providence. I didn't want to spend any money on the machine.

The Court: They have not the same type of New England conscience that you and Mr. Young have, apparently.

The Witness: Well, Atlas—this man that runs Atlas Tool Company, is not a New Englander.

[88] The Court: Well, that explains it.

Mr. Schimmel: Where did he come from?

The Witness: Italy.

By Mr. Barlow:

Q. You spoke of this Augat machine. Can you tell me what this picture is? A. That is the picture of the Augat machine that was demonstrated to me and I intended to purchase until I got cold feet hearing about this thing here.

This, incidentally, as a great improvement over any other machine for applying hinges. It is a continuous belt. You put the boxes on and they come down and kick over, themselves.

Q. When you went to see that machine, as seen in that picture, was the operation of the machine demonstrated to you? A. Yes. This is one of those boxes coming off of that machine. This box was actually hinged.

The Court: That is the hinge which is in controversy here?

The Witness: Yes.

By Mr. Barlow:

Q. Augat put on the hinge that is shown in that pink box for you, to demonstrate how the machine operated? A. Yes.

Mr. Barlow: I offer the picture that was identified as Plaintiff's Exhibit 27.

[89] Mr. Schimmel: I feel I must object. I feel we are getting into that field——

The Court: I don't want to get, Mr. Barlow, into how the matter is manuafctured. Again I want to say, and make myself specifically clear: I am of the impression, as I have been earlier in the case, that there is a decided improvement in this hinge. The only thing I am concerned with is whether or not it has been anticipated by the patent references cited, particularly Powell. So, how it eventually comes out, you have sufficiently demonstrated that to me. And I make that on the record.

Mr. Schimmel: Will we exclude these, as well as the others?

The Court: I think they are of no relevance to me.

Mr. Barlow: I would like to show in the record the extent of infringement that is going on.

The Court: Yes, but you see, here is the point: No one has infringed anything up to now because there is no patent.

Mr. Barlow: I will say the amount of tribute that others have paid to the invention.

The Court: I will take that, because the witness has testified. But I don't want to get into an infringement case, because I can't possibly be jostled into that at this juncture because of the fact that there is no patent.

[90] (Photograph of Augat machine was marked Plaintiff's Exhibit No. 27 and received in evidence.)

Mr. Barlow: We don't have jurisdiction over these infringers here, either.

The Court: You would probably have to bring that up in the United States District Court in Providence—Judge Leahy.

Mr. Barlow: I will introduce that one into evidence as Plaintiff's Exhibit 28.

(Pink velvet-covered box was marked Plaintiff's Exhibit No. 28 and received in evidence.)

By Mr. Barlow:

Q. Mr. Thurston, in the box business is it fairly common that so-called corner stays are used for fastening together the corners of boxes, such as shown in Exhibit 19, and putting them in position such as shown in Exhibit 21? A.

Yes, this is commonly used, especially for hardware trade and the type of box consumer that need a rigid corner.

Q. How long have you known of it, being in the box business? A. Ever since I have been in the box business.

Q. You would say for over twenty-five years? A. Yes.

Q. Did it ever occur to you that a stay such as [91] that might be used for securing a hinge to a box? A. The thought never crossed my mind.

Q. And you have been the inventor of a number of patents, have you not? A. Yes, sir.

Q. Have you ever heard of anybody else attaching a hinge to a box by use of prongs such as shown in Exhibit 19, or such as shown in Exhibit 21? A. Well, the only hinges that I have seen attached with prongs of this type have been hinges that we have discussed here today and put into these exhibits.

Q. Such as Atlas showed you or such as Mr. Young made? A. That's right.

Q. Never anything before that? A. Never seen anything before.

Q. These stays are applied on the outside corners of the corners of the box, are they not? A. Always.

Q. Could a spring hinge be applied on the outside of a box? A. Could not.

Q. Would that appeal to you as a reason why box manufacturers who had never seen—who had always known of a corner stay, as a reason why that would not be applicable [92] to the application of a hinge in this manner? A. It's possible, because the two operations are so far apart, you don't connect a corner stay with a hinge very often.

Q. There is movement in a hinge and no movement in a corner stay? A. That's correct.

Q. One is more of a rigid angle-iron affair? A. That's right.

The Court: How about if you were addressing yourself to the matter of adherence of the hinge to the box, and you had experimented with the so-called

Atlas hinge, and were not satisfied with it, and so therefore were casting about looking for a firmer means of adhesion; being in the box business for twenty-five years, and having utilized and at least known of the so-called stay that counsel has referred to, might you not possibly conclude as a result of investigation and experimentation that the type of prong there used might possibly be the answer to the problem of adhering the hinge more firmly and effectively in the box?

The Witness: I wish I had thought of it.

The Court: Yes. You didn't think of it, I know that.

The Witness: I think it's an excellent way to attach the hinge to the box, the best that we have seen. It just didn't come to me any more than it has come to anybody [93] else.

The Court: But my question is, you have been engaged more or less in the executive end of the business now for some little time, but, query: whether or not if you were actually engaged in looking for a hinge of that character, so applied and so attached to the box, might you not conceivably, casting about, and looking about, conclude that here was the idea?

The Witness: Now that I have seen it, it seems very logical, it seems as if it was the thing that somebody should have done years ago, it seems so logical, how could anybody have missed it up until now?

The Court: I think that is just a fair observation.

By Mr. Barlow:

Q. They just did miss it, though? A. Evidently.

Mr. Barlow: I think that is all. You may inquire.

Cross examination by Mr. Schimmel:

Q. I have only one further question, in view of the Court's question; it took what I wanted to ask you. You were familiar with the fact that it was old, to attach the hinge member by a single prong struck out from the hinge plate, weren't you? A. We manufacture a snap hinge box now made that way [94] with that hinge.

Q. Were you familiar with that practice of attaching the hinge plate to the cardboard box by the single prong? A. Yes.

Q. You were familiar with that? A. Yes.

Q. And you were also familiar with the stay such as Plaintiff's Exhibit 19? A. That's right.

Q. Isn't the only difference between those two the number of prongs? A. Well, we can't—the only actual physical difference in the two hinges is in the prongs, but in the application you got something else again.

Q. As attaching means, the only difference is in one we have four prongs and othe other we have one prong? A. That's right.

Q. It doesn't make a particle of difference so far as the attachment of that metal plate to the cardboard box, whether inside or outside; wouldn't it operate exactly the same way? A. Well, you couldn't make a hinge action with a spring hinge if it were attached to the outside of the box. But you could attach it with a prong, any type of a prong, [95] or attach a piece of metal to a piece of cardboard. It wouldn't make any difference whether you attached it to the outside or inside of the box.

Q. That's what I mean, as far as the attaching of the metal plate to the cardboard is concerned, whether it is inside or outside, it doesn't make any difference. A. The cardboard is the same on both sides.

Q. And all you have to do is force the prongs into the cardboard; that is correct, isn't it? A. Yes.

Re-direct examination by Mr. Barlow:

Q. Just to clear up the difference of the prongs: These prongs that are about the hole are differently shaped, are they not, than the prongs that are shown in such an exhibit as Exhibit 7? That is, the prongs of Exhibit 8 are differently shaped than the prongs of Exhibit No. 7? A. They are differently shaped and different length, sir.

Q. So there is more to it than the fact that there are just more prongs. And they are bent in different ways when they are attached to the box, are they not? A. They are bent in different ways.

Q. In fact, the prongs of Exhibit 8 are bent, we [96] will say, in directions of the four points of the compass? A. That's right.

Q. And the prongs of Exhibit 7 are all bent in one direction? A. One of the faults with this hinge.

Q. That is exhibit— A. Exhibit 7—is that we have difficulty in aligning the box and the covers at times, because these prongs will throw one way or the other.

> The Court: You mean the prongs were in a parallel line?
>
> The Witness: When the tool comes down and knocks them into the cardboard, it has a tendency to throw the box out of line. These prongs are pushed this way, and these are pushed this way, and we are apt to get a lot of boxes that come off center, like this. This hinge goes right down, straight down. The things turn over.
>
> This action, the tool for this hinge, is an action where the tool slides and pushes those things over. It comes out off-square.

Re-cross examination by Mr. Schimmel:

Q. While we are on the question of the difference of shape, or difference of direction of the prongs, wouldn't it be true the moment you had more than one prong coming

[97] out of any one hole being used to attach the metal plate to the cardboard, that they would necessarily be bent in different directions in order to function as a holding means? A. If several prongs are coming out of the same hole, out of the same die.

Q. Out of the same metal? A. Out of the same piece of metal, when the die came down, that metal wouldn't necessarily turn in opposite directions.

Q. When it is clamped to the cardboard? A. It wouldn't necessarily throw out in all four directions. The way that that metal throws out into the cardboard is dependent upon the way the die is made that stamps out the piece of metal. In this Exhibit 8, this die is made in such a way that these prongs are already started and thrown in four directions, so that when it goes through, when the prongs go through the cardboard and the diehead comes down, with that start they go in four different directions, they necessarily spread in four different directions, and the tool is simply one like a solid hammer that comes down and hits that.

Q. Wouldn't that be true if you just had two prongs on opposite ends of the diameter of the hole? A. If you just had two prongs.

[98] Q. Supposing you had two prongs on opposite ends of the diameter? A. You mean a similar hole to this, except that with two prongs instead of four?

Q. Yes. And wouldn't the prongs, in order to hold the metal to the cardboard, then be bent over in different directions? A. If the piece was stamped and started in different directions when the die came down, it would throw the prongs in opposite directions.

Q. And if it didn't, you wouldn't think it was a good attaching means, would you? A. If it didn't do that, it wouldn't be good attaching means.

Q. You wouldn't think it was; you would think it was a failure. In other words, to get a good attachment, wouldn't you necessarily figure you would want those prongs to go in different directions? A. That's true, but then we have never had good attaching for a hinge, because these prongs have to be adjusted with the die by the die sliding over them and pushing them down instead of the die coming down and pushing down in one slap.

Mr. Schimmel: That is all.
Mr. Barlow: Mr. Rocheleau.

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[99] Thereupon Joseph Rocheleau was called as a witness, and being first duly sworn, was examined and testified as follows:

Direct examination by Mr. Barlow:

Q. Will you please state your name, age, residence, and occupation? A. Joseph Rocheleau, 614 Cottage Street, Pawtucket, Rhode Island; forty-eight years old. I work for Douglas Young, Inc. I am a department and production foreman, and have charge with the setting and adjusting of all the cutting machines and presses in the plant.

Q. Will you relate your early experience from the time you first went to work up to the present time? A. Well, it's about all I ever done. I don't know, I don't do anything else. I went to work when I was sixteen years old. That was in 1919. I worked for the Taunton Paper Box Company in Taunton, Massachusetts, for about two and a half to three years.

Q. What was your work there? A. My work there was really elementary. I started by mixing glue and passing glue, and operating all types of paper box machinery.

Q. Where were you next employed? [100] A. I went to work for the Mason Box Company in Attleboro Falls, for whom Mr. Russell I. Rhodes at the time was the general manager. I worked there from 1922 until 1931.

Q. And during the time that you worked there, did you ever see anything of a box such as shown in the Rhodes patent, 1,626,301? A. Yes, I did, I have seen that hinge, I saw it stamped out, and saw an experimental box being made with it.

Q. Do you know whether or not that ever went into general production? A. To the best of my knowledge, the box was never sold commercially because they had so much trouble in manufacturing it.

> Mr. Schimmel: I object to that, Your Honor.
>
> The Court: Well, I am not concerned with whether or not—a patent was granted with respect to it.

By Mr. Barlow:

Q. Where did you work after that? A. I left Mason Box Company in 1931, and went to work for the Douglas Young Company in Pawtucket, Rhode Island. I have been there ever since.

Q. During this term of working for Douglas Young, Inc., were you at one time or another loaned out to other box companies? [101] A. Yes, I was, several times. During the war, when the Stoke & Smith Company of Philadelphia couldn't get enough service men, they asked Mr. Young to loan me out to other companies to help train some of their men that were going off to war faster than they could replace them.

Q. Were there a number of such box companies that you went to at that time? A. About a half a dozen, I guess.

Q. This was because of your special skills in adjusting box machinery? A. Well, probably more because of seniority, I guess, than anything else. I guess I was the oldest man around the place in the business. I mean that was too old for the draft.

> The Court: You had the skill, except they weren't making boxes in the Army.
>
> The Witness: Yes.

By Mr. Barlow:

Q. At some time or other during the course of your employment with Douglas Young, did you encounter a hinge such as shown in Exhibit 5? A. Yes.

Q. And also a hinge such as shown in Exhibit 12-A? A. Yes.

Q. Where did those hinges come from? [102] A. Well, actually I don't know. I have been told that this hinge was bought from the Atlas Company.

> The Court: Of course, now I have to enforce the rule, very seldom enforced in a patent case, that this is hearsay; and it is not too material, either.
>
> The Witness: This particular hinge, Exhibit 5, I don't know where it comes from.

By Mr. Barlow:

Q. How about Exhibit 12-A? A. Exhibit 12-A comes from the Atlas Tool Company.

> Mr. Schimmel: Is that of your own personal knowledge?
>
> The Witness: Yes. I didn't see them come out of the Atlas Tool factory.
>
> The Court: Then what is your knowledge with respect to it?
>
> The Witness: Well, I was told by Mr. Young that we were buying those hinges from the Atlas Tool Company.
>
> The Court: How many years have you been in the box business?
>
> The Witness: Thirty-three, something like that, pretty close.
>
> The Court: In twenty-five years as a lawyer, I would have to tell you that the evidence which you now proffer is immaterial and has to be excluded, because it is hearsay, because you don't know of

your own knowledge, you were told [103] by somebody else.

The Witness: No, I don't. That is true. And I agree to it, too, that I don't know.

The Court: Do you agree that it should be excluded?

The Witness: I believe I do, yes. As long as it is only hearsay. In other words, if my wife came home with a piece of meat and said I bought it at Tatow's market, it would still be hearsay.

(Discussion off the record.)

Q. Are you familiar—you applied those in Exhibit 12-A? A. Yes.

Q. And applied those in the Douglas Young, Inc? A. Yes.

Q. Do you know how it came about that a hinge such as Exhibit 9 was used by Douglas Young Company? A. Well, as I was putting on these hinges in Exhibit—that is Exhibit No. 12-A, is that correct?—yes, we were putting these hinges on and experienced enough difficulty to make a production man's hair turn gray, which it has, but probably not because of that. With all due respect to the hinge, there was so many production problems involved that it was becoming disgusting.

This particular hinge, which was the best that we had [104] seen up until that time, was entirely unsatisfactory from a production angle. Too many problems involved. The problem of alignment—we would get boxes that would open in the back because these prongs weren't settling right. Also, we got them that stayed open in the front, almost like a man with false teeth that got the wrong set back from the dentist, high in the back, and he couldn't bite in the front.

The Court: The dentist didn't use the right prongs.

The Witness: Something wrong.

By Mr. Barlow:

Some time or other did Mr. Young tell you of his conception of a hinge such as shown in Exhibit 9? A. He came in one day, and he was all excited about something. I didn't know what it was, but he says to me, he says, "We have probably got something now that will get rid of all your problems." In fact, it is my problems I am worrying about, not so much Douglas Young's, because all he has to do is pay me. I have to iron these problems out in production.

And I said, "Yes, that will be pretty darn good to hear."

So he showed me this idea on paper, just a drawing that he made of it, and I said it looks very good, it looks like the answer. I said, "Now all you have to do is have **[105]** tools made, and we will try it out."

But I have seen so many things tried out that I didn't pay too much attention to it, because I have got to see them in production before they start making money. But when I started applying these hinges, I knew that that was the answer to practically all the hinging problems that we had had inside of the factory.

Q. Did you have these tools produced for making this hinge? A. Yes, we did, we practically designed them ourselves, and had them made by McGough & Kilgus, Providence, Rhode Island.

The Court: This isn't the tool, is it? (Referring to wrapped package being brought forward by Mr. Barlow.)

Mr. Barlow: We are going to show how these tools operate.

The Court: Am I concerned with that, now? I am only concerned with what Mr. Young has invented. I don't care how he has brought it from the realm of the imagination or from the mental realm into the practical, because he is not seeking a patent on the tool, he is seeking a patent on the end product, which is the pronged hinge. So, while it would be very interesting, I am wondering how important or how relevant it would be to the controversy that we are engaged in.

[106] Mr. Barlow: In some of the questions that you asked Mr. Thurston, he explained how the cover and the body of the box might get askew because of the sliding of the tools. We do have the tools to show how that sliding action occurs.

The Court: Well, I can see, as I have said before, from the type of exhibit here already in evidence, that the Young hinge, or the mechanism that goes with it, is a very definite improvement, in my view, over what has been used in the trade hitherto. The only thing you have to convince me of is that it is an improvement of the character that involves the inventive faculty. And against that you have the two patents, the three patents that are cited—the two Rhodes patents, which give the idea of a prong as applied to a hinge, and then you have the citation of the Powell patent, which is an important citation, I believe and have no hesitancy in saying.

By Mr. Barlow:

Q. Mr. Rocheleau, I show you a piece of metal that is labeled Exhibit 19, also a drawing of a box in a patent paper, Exhibit 21, and ask you if the corner stay, such as shown in this drawing and made from a piece of metal such as Exhibit 19, is something that has been used in the Douglas Young factory for a long period of time. A. Yes, the machine was there when I went there in [107] 1931.

Q. Do you know whether or not other box manufacturers are familiar with this sort of corner stay that is shown in this patent, Exhibit 21? A. I believe that——

Mr. Schimmel: Technically, I object. I don't see any point in that at all.

The Court: I might say, I have seen, myself, that type of stay, and I have not even in the remotest way been connected with the box business. I have seen that type used.

By Mr. Barlow:

Q. You have seen the machines in other box manufacturing plants that you have visited, that would apply a stay such as shown in that patent? A. Yes.

Q. First, did it ever occur to you that a stay such as that, or the manner of fastening the stay such as shown in that patent, could be applied to a spring hinge? A. No, it never has.

Q. Do you know whether or not any other box manufacturer has used an application of that means of fastening for spring hinge? A. Well, not any of the half a dozen souls that I have done service work for in our locality.

[108] Q. And that stay is on the outside of the box, is it? A. It is.

Q. Could a spring hinge be applied on the outside of a box? A. Not to the best of my knowledge.

Mr. Barlow: You may inquire.
Mr. Schimmel: I have no questions.
The Court: Very well, sir, thank you.

(The witness stepped down.)

Mr. Barlow: That completes the testimony that I have.

Mr. Schimmel: All the defendant has is the folder, as is usual, on Your Honor's desk, which comprises the two Rhodes patents, the Bicker patent, and the Powell patent, and the decisions below.

The Court: Let me ask you a question as a matter of general information. First of all, take the first Rhodes patent, 1,430,029. That was issued September 26, 1922. And he says in the application:

"My present invention relates to improvements in boxes having hinged covers of the type which are largely used in packing jewelry, safety razors, perfumes, toilet sets, and like articles for shipment and display."

That is the nature of the improvement here.

Mr. Schimmel: Same field.

[109] The Court: Then he goes down and says this:

"In such boxes as used for display purposes the strain on the hinge leaves has heretofore required the box members to be formed of relatively strong and rigid material such as metal, wood or the like, and especially is this true of those boxes embodying a spring hinge which automatically holds the cover in open or closed position."

That is the problem here.

"The present invention aims to provide a construction by which the body of the box may be made of paper or cardboard or similar inexpensive material which will nevertheless be strong and durable; and the invention includes the novel features of construction and arrangement and combination of parts hereinafter described and particularly defined by the appended claims."

That is the same thing as here. Then on the back it says:

"I claim—1. In combination, a box of fibrous material, comprising two tray like members connected by a spring hinge at one end, reinforcing plates of flat sheet metal secured to the walls which carry the hinges and having right-angularly turned parts overlying the adjoining side walls, said plates and the hinge leaves having aligning slots, and a flat piece of sheet metal having tongues pass- [110] ing through said slots and overturned to hold the parts together."

He was given a patent in 1922. And in 1927 he was given a patent for the same type of container utilized for the same purpose, in which he says, however, by way of differentiation:

"An outstanding characteristic of this invention consists in the provision of lips on the hinge leaves which serve securely to connect the leaves to the box structure."

And he goes on to state that it can be produced at a relatively low cost, and by making the spring in one piece and of sturdy material liability of breakage —and so on.

"I claim a hinge for jewelry boxes and the like comprising a pair of pivoted hinge members, each member having a metal base plate of a length to cover a substantial part of the bottom portion or cover portion of the box respectively, and designed to be secured thereto by means penetrating said portions respectively, and a leaf integral with the base plate and extending at substantially right angles"—and so on.

What I can't understand is why he was granted a patent for this invention in 1927, without having cited against [111] him his own invention of 1922.

Mr. Schimmel: I can't answer that question. I can't put myself back into that position at that time.

But you will recognize this, and I think the evidence that has been brought forth today was this, that prior to Rhodes, his first patent, all the boxes had been made of metal, of much more rigid material, and Rhodes was the first to make one of cardboard.

The Court: That's right.

Mr. Schimmel: So that the first patent issued to Rhodes was predicated on the fact that he was the first to utilize the cardboard in making these boxes and get a structure which was substantially as rigid as the prior wood or metal structures were.

The Court: But he then was issued a patent in 1927 for the hinge and its appendages.

Mr. Schimmel: Just the hinge alone is the 1927 patent, it is not in combination with any cardboard or box structure.

The Court: Then you are making that distinction?

Mr. Schimmel: As to those two patents, yes.

The Court: In other words, you are saying that what this gentleman here is seeking is a patent in the nature of an improvement which he claims is a combination, combination of the box, combination of the hinge, and all that.

Mr. Schimmel: That is what the claims are directed [112] to, that combination, whereas Rhodes' second patent was not on that combination.

The Court: Suppose he didn't direct his claims to the combination but merely directed his claims to the alleged invention of the hinge and the prongs, query?

Mr. Schimmel: Query: We don't know what the situation would have been. But from the way the art has developed here, presumably the examiner did not find the exact structure in a single reference. He couldn't find a single reference that had this specific hinge and the attaching means.

The Court: Let me see whether or not he claims——

Mr. Schimmel: We have to concede that. There is not anticipating reference. There is a build-up of elements shown to be in individual patents.

The Court: You say, then, it is a substitution of the prongs of Powell with the box of Rhodes, and that he has a combination of old matter?

Mr. Schimmel: Combination of old elements.

The Court: Now, query: Whether or not, by virtue of the nature and character of this hinge, in combination with the cardboard container, he hasn't produced a combination which may be made up of old elements but from the standpoint of its unity of purpose and function doesn't result in something novel and new.

[113] Mr. Schimmel: Well, as to the novelty, I think we can concede it is novel, because we don't have an anticipating reference, single anticipation, but whether or not the improvement is such as to create a new function by combining the old elements is something I think that is present in this case.

The Court: When you go back on that, in the law of patents we say a "new function." It is very difficult to visualize in that situation with reference to an application of this character.

If you had a machine, as I recollect the situation, if each individual part of the machine functioned in its own individual state, and if they combined together their old parts, and they don't produce anything new, that would be one thing. But, query: Where you have got old things—because, after all, cardboard is old, hinges are old, and in addition to that, fasteners are old; we have the type of fastener, prong fastener, we have the idle type of fastener—they all unite together, and then the question comes down to whether or not it is a new function.

Mr. Schimmel: Whether or not you might say the result is new, the function is new or merely a difference in degree, the improvement is one of degree over what is shown in the art.

I think the theory and the law is the same whether it [114] is this product type of case, or whether a machine type of case.

The Court: I quite agree with you. It is very interesting.

You still got Mr. Powell to jump over. So you can give me a brief memorandum on that. Please do it in this fashion. Let's have it out of the way by the—how long a time do you want?

Mr. Barlow: If we are going to have references to the record—I could say five days after I get the record.

The Court: Don't tie yourself down. We adjourn here the 28th of June.

Mr. Barlow: Our whole point, of course, is that by putting the prongs of Powell on a hinge, we practically amalgamate that hinge with the cardboard box, so that even though you get movement of a hinge back and forth, you don't get a sliding.

The Court: But the Patent Office says what you have done is combined old things; you may have a novel result, but it is not invention. Is that the point?

Mr. Schimmel: That is the point.

Mr. Barlow: We say box manufacturers have known about these things for twenty-five or thirty years. They have had spring hinges, they have had Powell, or what Powell shows. Nobody ever thought of putting them together.

[115] The Court: That is always the problem. Nobody ever thinks of putting them together in improvements.

Mr. Barlow: No, never did, and when they put them together, they get something way beyond what they expected.

The Court: Well, that's the crux of the matter, isn't it?

Mr. Barlow: That's it.

The Court: I like to decide these matters when counsel on neither side are around. I will examine the record myself. I will have it, I assume, certainly by the 15th of June?

Mr. Barlow: Yes.

The Court: You are going to give me a brief memorandum?

Mr. Barlow: Directed primarily to Powell.

Mr. Schimmel: I will only need five days after I get his.

The Court: All right.

Mr. Barlow: Have I put in evidence all the exhibits that I have identified?

The Court: If you haven't, they are in now. You have now. Everything that is in that should be in, that I haven't excluded.

The Deputy Clerk: All except two. Number 26 is not included, and the photograph.

The Court: The photograph I think I looked at, but I [116] didn't think it was relevant. But you didn't press the objection strenuously.

Mr. Schimmel: I assumed you had sustained the exclusion.

The Court: This photograph is interesting from the standpoint of machinery, how they do it.

The Deputy Clerk: 27 and 28, your last two exhibits.

The Court: Put 28 in. You have no objection to 28.

Mr. Schimmel: All the others are in, I guess.

(Thereupon, at 3:10 o'clock, p. m., the above-entitled matter was concluded.)

REPORTER'S CERTIFICATE.

Certified to be the official transcript of proceedings had in *Lewis Douglas Young* v. *John A. Marzall,* C. A. 2808-51, Monday, May 26, 1952.

ROBERT I. THIEL,
Official Reporter.

From Plaintiff's Exhibit 1.

Specification and Drawings of Young Application Serial No. 69301, Filed Jan. 5, 1949.

This invention relates to a cardboard box in which a spring hinge joins the body and cover sections of the box together.

On of the objects of the invention is to provide a light weight or thin hinge and a light weight or thin box and by addition of the hinge to the box stiffen both along the connection.

Another object of the invention is to provide a metal hinge on a cardboard box which may be attached without disfiguring the outer surface of the box to an extent which will require a paper cover over the outer surface after the hinge is in place.

Another object of the invention is to provide attaching means for the hinge so as to avoid ugly projections which are in use and show from the outside of the box.

Another object of the invention is to provide a spring hinge on a cardboard box which will give more snap of the cover in moving from open to closed position.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings:

Figure 1 is a perspective view of the cardboard box with my hinge in place with the cover shown in open position.

Figure 2 is a perspective view of a fragmental portion of the box showing the back of the box when in closed position.

Figure 3 is a perspective view of the hinge with the spring detached.

Figure 4 is a section on line 4-4 of Figure 3.

Figure 5 is a sectional view through the box showing the hinge in place on the box.

Figure 6 is a view similar to Figure 5 illustrating a paper cover as placed over the outside surface of the box to cover its hinge.

From Plaintiff's Exhibit 1.

Figure 7 is a perspective view of the spring which is attached to the hinge.

In proceeding with this invention I provide from rather light weight stock a pair of metal plates which have eyes rolled upon edges to be hinged together. Each of the plates is provided with a plurality of openings spaced lengthwise from end to end, and from the edges of each of the openings a plurality of prongs project, which prongs may pass through the cardboard rear wall of the box with their points bent over to clinch the back or rear wall of the box and fasten the plate thereto. The points of these projections are so small that their protrusions through the rear wall are relatively not unsightly and thus no cover need be provided for the outer surface where the prongs may be seen.

A spring is attached to these plates so as to urge the plates one relatively to the other to move the cover either to open or closed position depending on the relative position of the plates.

With reference to the drawings, I have provided a body section 10 and a cover section 11. The body section has a rear wall 12 while the cover section has a rear wall 13. When in closed position the edges of the rear walls 12 and 13 are in abutting relation. In order to maintain them in this relation one relative to the other, I have provided a hinge which is designated generally 14 and shown in perspective in Figure 3.

This hinge 14 comprises plates 15 and 16 which have eyes 17 and 18 rolled from the edges and which are positioned in alignment to receive a pintle pin 19 passing thru these eyes so as to hingedly relate the plates 15 and 16. To attach these plates to the rear walls of the sections 10 and 11, I have provided a plurality of openings 20 at spaced points along the length of each of the plates, and from the edges of the openings 20 projections 21 extend, each opening having a plurality of such projections extending from the edge thereof. Four such projections are shown as provided about each opening in the drawings, but it will

From Plaintiff's Exhibit 1.

be readily apparent that the number may be varied as occasion may require.

The projections 21 are of such a length that they will protrude thru the thickness of the rear walls 12 or 13 and after protruding thru the walls they will be deflected as shown at 22 in Figures 5 or 6 so as to clinch the back wall securely drawing the plate firmly against the inner surface of the back wall and imbedding themselves in the surfaces of the rear wall as shown in Figures 5 or 6, thus but a very small area covered by the points of the projections will be visible as shown in Figure 2. I find that in many cases it is unnecessary to cover the outer surface of the rear wall because of the rather inconspicuous ends 22 as shown in Figure 2. However, in some cases there is a covering 23 of paper over the outer surface provided as in Figure 6.

Each of the plates 15 and 16 is provided with a lip 24 as seen in Figure 3 and an arcuate spring 25 as shown in perspective in Figure 7 has its ends inturned as at 26 so as to engage these lips to regulate the movement of the cover in its movement to an open position just slightly beyond 90 degrees from its closed position as shown in Figure 1 where the end portions of the arc of the spring 25 tends to force the cover in an opening direction to the limit provided by the inturned ends 26 while after the cover is swung beyond approximately an angle of 45 degrees to the plane of the body, the spring ends swing the cover towards closed position and tend to hold the edge surfaces of the walls of the body and cover in abutting relation as shown in Figures 2, 5 and 6.

The above manner of fastening the hinges in position serves to very effectively attach the hinges and by having a plurality of points attached to hold the plates against the rear walls of the box both the hinge and rear walls are stiffened to a substantial extent as one supports the other. The snap which is provided by reason of this stiffness is very much increased and the plates which are made of rather soft material become the desired stiffness after attached to the box.

FROM PLAINTIFF'S EXHIBIT 1

Fig. 1.

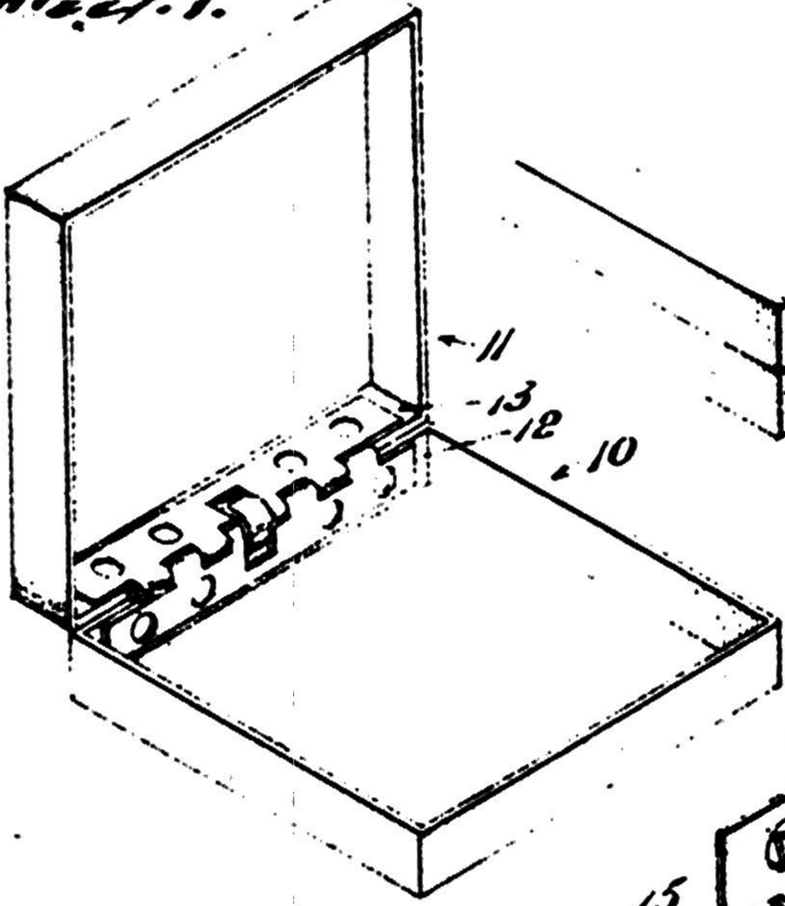


Fig. 2.

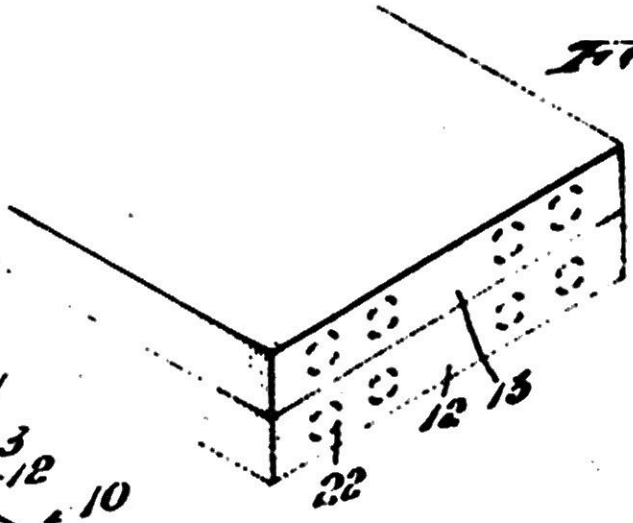


Fig. 3.

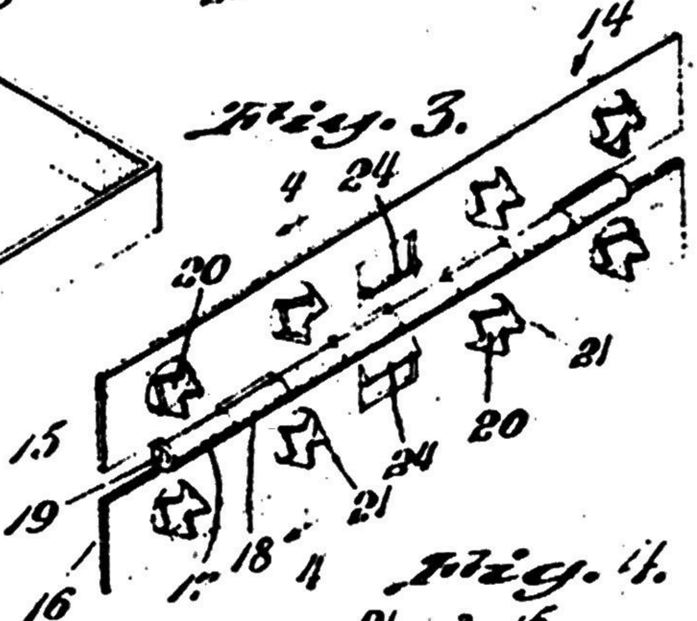


Fig. 4.

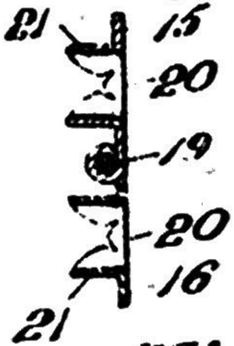


Fig. 5.

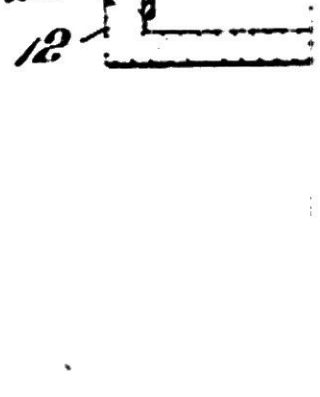


Fig. 6.

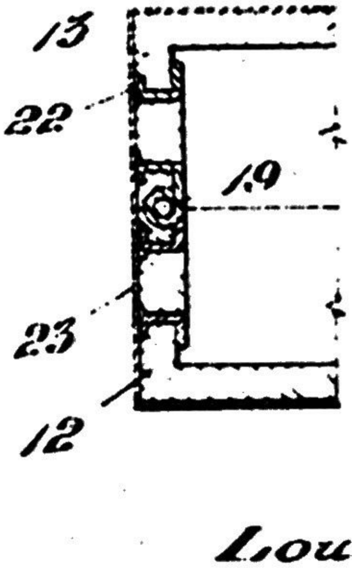
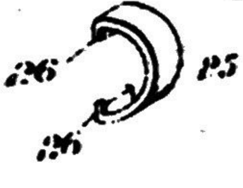


Fig. 7.



INVENTOR.
Louis Douglas Young
BY
Barlow & Barlow
ATTORNEYS.

Plaintiff's Exhibit 21.

Feb. 26, 1929. 1,703,522

H. ESCOBALES

METAL STAY AND METHOD OF MAKING THE SAME

Filed Oct. 6, 1927

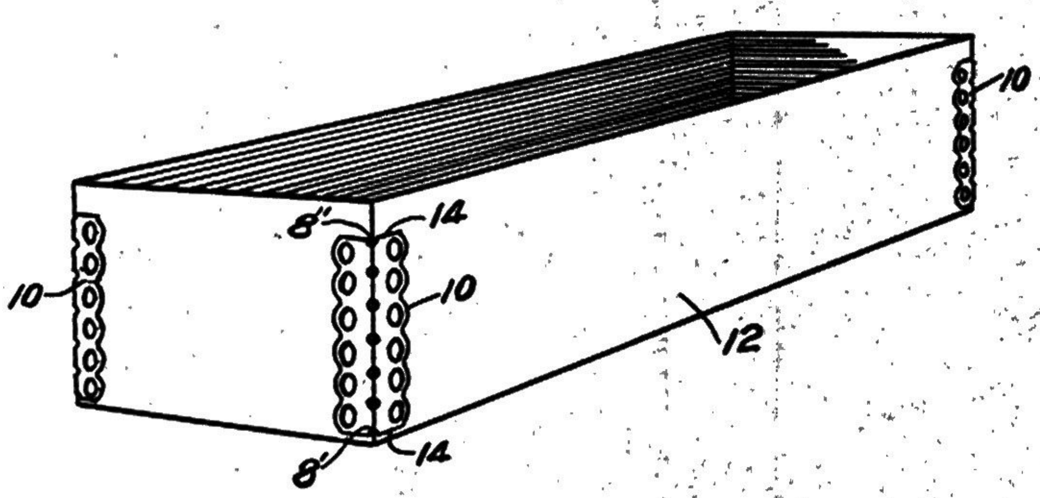


FIG. 1.

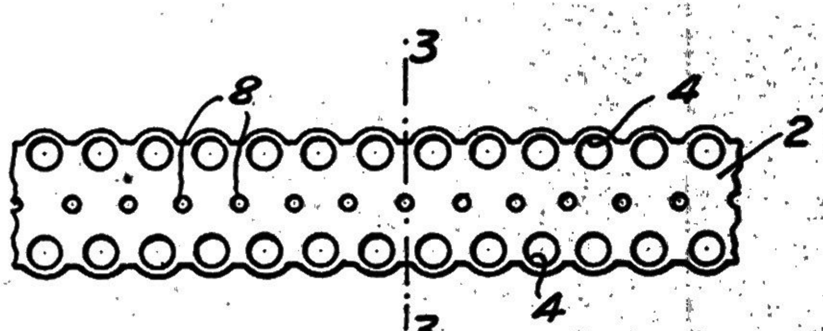


FIG. 2.

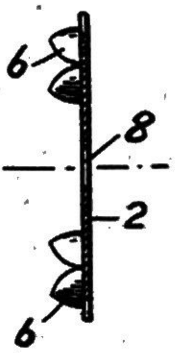


FIG. 3.

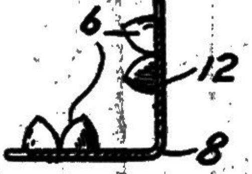


FIG. 4.

INVENTOR

WITNESS:

Hilarion Escobales

BY

Busser & Harding

ATTORNEYS.

AVAILABLE

Patented Feb. 26, 1929. **1,703,522**

UNITED STATES PATENT OFFICE.

HILARION ESCOBALES, OF TOMPKINSVILLE, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO HOWARD WOLF, BENJAMIN WOLF, ELIAS WOLF, LOUIS WOLF, AND ALBERT WOLF, ALL OF PHILADELPHIA, PENNSYLVANIA, DOING BUSINESS AS NATIONAL METAL EDGE BOX COMPANY.

METAL STAY AND METHOD OF MAKING THE SAME.

Application filed October 6, 1927. Serial No. 224,357.

My invention relates to an improved metal stay for joining the meeting edges of the sides of a box of paper or other material and to an improved method of making the same.

Heretofore it has been customary to feed to a box staying machine a continuous flat strip of metal having prongs formed along its longitudinal edges. The machine cuts off a suitable length of material to form a stay, bends it into a shape suitable for application to the box, and clinches the prongs in the walls of a box which the operator has placed into the machine. The cutting is commonly done by a shearing blade having a V-shaped notch therein, which notch has sharpened sides and cooperates with a straight ledger blade to sever the strip. Because of the shape of the cutting blade the outer portions of the strip are cut first and the cut proceeds inwardly, the vertex of the notch accomplishing the last part of the cutting at a point intermediate the longitudinal edges of the strip. When a thin strip of metal is cut it is frequently noticed that, due to the fact that the portions of the strip on opposite sides of the cut have moved relatively to each other, the portion of the metal last cut is bent out of the plane of the strip forming a sharp edge. In box staying machines this sharp edge is formed at a point in the cut edge of a stay intermediate the longitudinal edges thereof and is very objectionable since it is likely to scratch a person handling the box or polished furniture or to tear clothing.

In the case of a box having sides meeting at an angle where they are secured by a metal stay, that portion of a transverse end of the stay at the vertex of the angle forms a slight projection liable to scratch objects, which projection cannot be satisfactorily pressed into the box without cutting the box walls.

The objects of the present invention are, accordingly, the provision of a satisfactory stay and a method of making the same which will avoid the objections outlined above.

In the drawing, which shows a preferred embodiment of the invention,

Fig. 1 shows a box having the sides secured by the improved stay;

Fig. 2 is a plan view of a metal strip from which stays may be cut;

Fig. 3 is a section on line 3—3 of Fig. 2; and

Fig. 4 is a view similar to Fig. 3 but showing the strip bent for application to the right angular corner of a box.

The strip 2 is provided with holes 4 the peripheries of which carry prongs 6, these prongs being formed by punching the strip in the usual manner.

Holes 8 are formed along the longitudinal center line of strip 2, each hole being formed intermediate adjacent pairs of opposed sets of prongs. Strip 2 is adapted to be transversely cut to form stays 10 through one of these holes, for example, on a line such as that indicated by section line 3—3 in Fig. 2. Ordinarily this cutting is accomplished by the sides of a V-shaped notch in a cutting blade and proceeds inwardly from the edges. Since the material is cut away at the hole 8 and this hole is arranged in the path of the vertex of the notch, the vertex does not cut any portion of the material and the formation of an objectionable sharp prong is avoided.

The stay 10 is bent along a longitudinal line as indicated in Fig. 4 and applied to the meeting edges of the sides of a paper box 12, and the prongs 6 are clinched therein to form a reinforced box edge. The holes 8′ form depressions in the transverse edges 14, which edges are pressed inwardly into the box material to form smooth ends. In forming boxes with an angular corner it is desirable to have notches 8′ directly over the corner thus avoiding the objectionable projecting angle usually formed.

While there is disclosed in Fig. 2 a strip having holes 8 disposed intermediate all adjacent pairs of opposed sets of prongs, it is clear that such holes need only be provided where it is desired to cut the strip. By providing the strip with holes as shown, however, the same strip may be cut to form a great variety of stays of different lengths to be applied to various sizes of boxes.

The shape of holes 8 may also be varied within the scope of this invention, and it will be seen that, although the invention is illustrated in connection with the manufacture of a box having angularly meeting sides, the invention is also applicable to the formation of stays which may be curved or straight in cross section when applied to articles other than boxes. The stay may advantageously be used in a flat condition, for example, for covering seams.

A further advantage resulting from the provision of the line of holes 8 extending along the longitudinal center of the strip is that the strip folds more readily and accurately along its center line when it is desired to apply it to an angular corner, owing to the fact that the strip is somewhat weakened along this line.

What I claim as my invention and desire to protect by Letters Patent is:

1. A metallic strip having a row of attaching devices along each longitudinal edge, the attaching devices of each row being arranged respectively in transverse alinement with the attaching devices of the other row, said metallic strip also having a row of holes arranged along the longitudinal center of the strip, said holes being arranged in transverse alinement with the respective spaces between adjacent attaching devices of each row, thereby allowing the strip to be cut transversely between adjacent attaching devices of each row in intersection with the corresponding hole to form individual stays having a number of attaching devices along opposite longitudinal edges and having end edges provided with a central notch.

2. A metallic strip having a row of holes along each longitudinal edge and a set of prongs extending from the periphery of each hole and forming an attaching device, the holes along opposite longitudinal edges being arranged in transverse alinement, said metallic strip also having a row of smaller holes arranged along the longitudinal center of the strip and corresponding in number to the number of attaching devices in each row, each of said smaller holes being arranged on a transverse line extending at right angles to the longitudinal edges of the strip and intersecting each longitudinal edge midway between two adjacent attaching devices, whereby the strip may be cut along two transverse lines to form a stay having along each longitudinal edge a row of fastening devices and along its short end edges longitudinally projecting members on opposite sides of a central notch and which are bendable into engagement with the material to which the stay is applied.

In testimony of which invention, I have hereunto set my hand, at Tompkinsville, S. I., N. Y., on this 26 day of September, 1927.

HILARION ESCOBALES.

BEST COPY
from the original

Defendant's Exhibit A.

R. I. RHODES.
BOX.
APPLICATION FILED JAN. 26, 1920.

1,430,029. **Patented Sept. 26, 1922.**

Fig. 1.

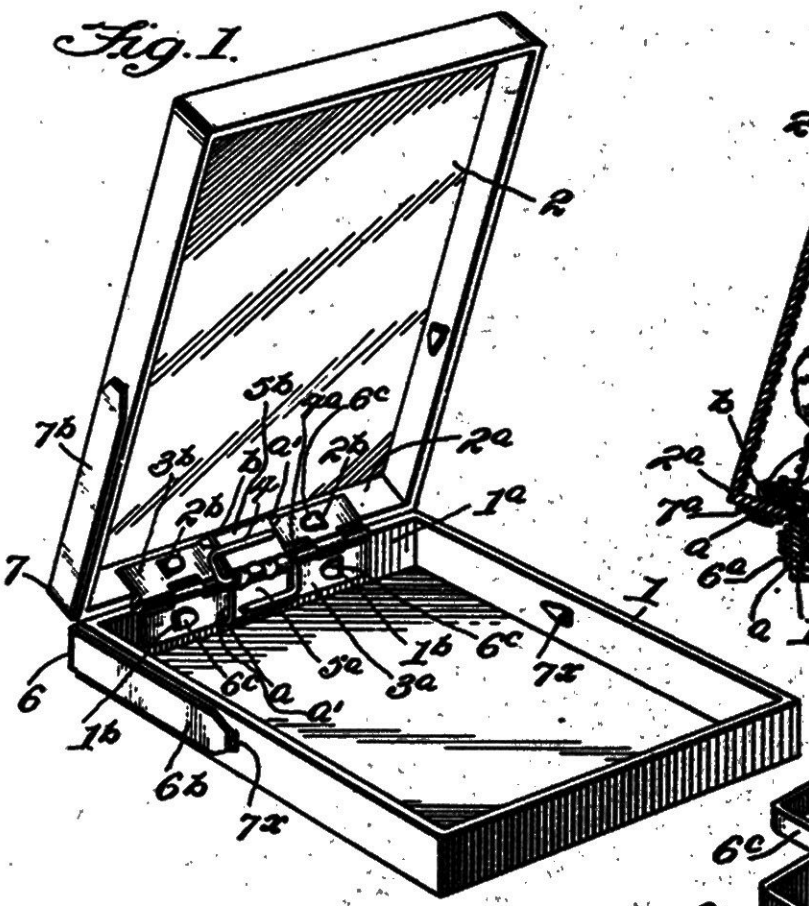


Fig. 3.

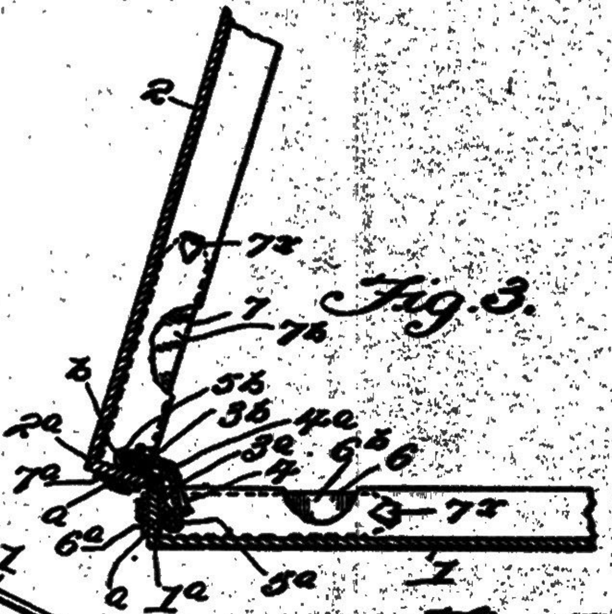


Fig. 5.

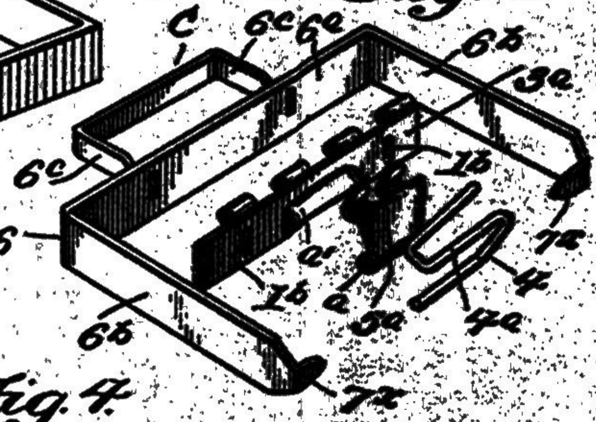


Fig. 2.

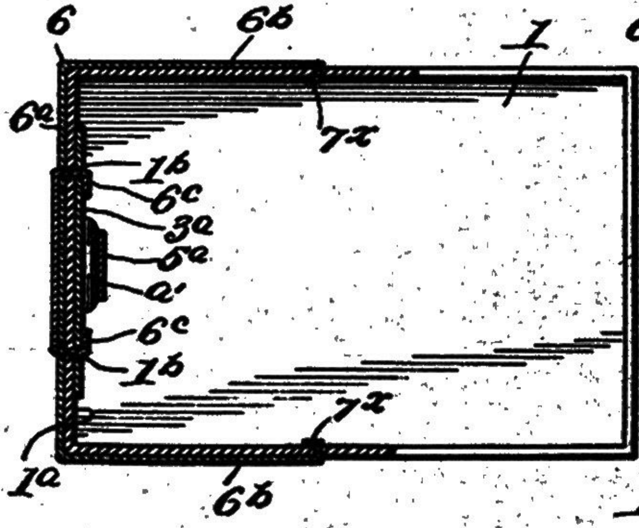
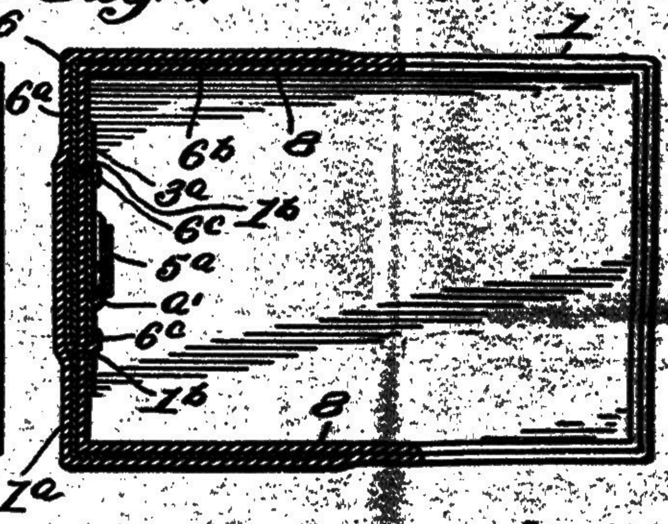


Fig. 4.



OPY AVAILABLE
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Inventor
Russell I. Rhodes

By Spear Middleton Donaldson & Hall
Attorney

Patented Sept. 26, 1922. **1,430,029**

UNITED STATES PATENT OFFICE.

RUSSELL I. RHODES, OF ATTLEBORO FALLS, MASSACHUSETTS.

BOX.

Application filed January 26, 1920. Serial No. 353,968.

To all whom it may concern:

Be it known that I, Russell I. Rhodes, a citizen of the United States, and resident of Attleboro Falls, Massachusetts, have invented certain new and useful Improvements in Boxes, of which the following is a specification.

My present invention relates to improvements in boxes having hinged covers of the type which are largely used in packing jewelry, safety razors, perfumes, toilet sets, and like articles for shipment and display.

In such boxes as used for display purposes the strain on the hinge leaves has heretofore required the box members to be formed of relatively strong and rigid material such as metal, wood or the like, and especially is this true of those boxes embodying a spring hinge which automatically holds the cover in open or closed position.

The present invention aims to provide a construction by which the body of the box may be made of paper or cardboard or similar inexpensive material which will nevertheless be strong and durable; and the invention includes the novel features of construction and arrangement and combination of parts hereinafter described and particularly defined by the appended claims.

An embodiment of my invention is illustrated in the accompanying drawing in which—

Fig. 1 is a perspective view of a box having a spring hinge cover, with the cover in its open position.

Fig. 2 is a sectional plan of the box member, and

Fig. 3 is a sectional view of Fig. 1.

Fig. 4 is a view of a modification.

Fig. 5 is a view of the hinge and reinforcements of the box bottom dismantled.

Referring by reference characters to this drawing, the numeral 1 designates the body of the box and 2 the cover. These are, for convenience, shown as of rectangular form, but it will be understood that the shape of the box is immaterial as it might be round, hexagonal, or in fact, any shape desired.

The end walls 1^a and 2^a of the box and its cover are connected respectively by the hinge leaves 3^a and 3^b and are acted upon by the spring 4 which tends to hold the cover in either an open or closed position in the manner well understood by those skilled in the art.

This action is preferably secured by having a spring carrying device consisting of two hinged plates 5^a and 5^b which are pivotally connected together by the intermediate portion 4^a of the S shaped spring passing through aligning eyes on the plates 5^a and 5^b, the terminal portions of the springs bearing against the faces of the plates as shown. The outer extremities of the plates 5^a and 5^b are overturned to engage the outer edges of the hinge members as shown at *a* and *b* respectively, said hinge plates having struck up portions *a′* and *b′* to receive and countersink said overturned ends of the plates.

In order that the box may be constructed of card board, or like relatively weak material, I provide the box and cover with reinforcing hinge carrying members 6 and 7 respectively, which are preferably made of a height commensurate with the height of the box and cover walls. These members are shaped to conform to a sufficient portion of the box and cover to secure the desired bracing effect, and in the form shown, comprise ends bars 6^a and 7^a co-operating with end wall of the box, and side wings 6^b and 7^b extending along the side walls for a suitable distance. The hinge leaves may be connected to the end bars 6^a and 7^a in any suitable manner, but I prefer to provide the hinge leaves with slots 1^b and 2^b and the bars 6^a with corresponding slots, through which slots are passed the overturned ends 6^c of a bar *c*, these ends being clenched or bent over as shown in Figs. 3 and 4.

The reinforcing members may be secured to the end and side walls of the box and cover respectively in any suitable manner, as by glue, rivets or the like. I prefer to make the side and end walls of double thickness of cardboard, to this end, placing within the said side and end walls, lining or reinforcing strips 8, the members 6 and 7 lying between the inner and outer layers of the walls so formed, which inner and outer layers may be glued or otherwise suitably secured together, as shown in Fig. 4.

It will be understood that these boxes are covered with ornamental paper, cloth, velvet, leather, or other suitable material, and are usually lined or padded for the reception of the articles, this lining or padding being omitted for clearness of illustration.

The ends of the members 6 and 7 may be made of prong shape and passed through the walls of the box and clenched over as indicated at 7^x.

Having thus described my invention what I claim is—

1. In combination, a box of fibrous material, comprising two tray like members connected by a spring hinge at one end, reinforcing plates of flat sheet metal secured to the walls which carry the hinges and having right-angularly turned parts overlying the adjoining side walls, said plates and the hinge leaves having aligning slots, and a flat plate of sheet metal having tongues passing through said slots and overturned to hold the parts together.

2. In combination, a box of fibrous material, comprising two tray like members having laminated walls connected by a spring hinge at one end, reinforcing plates of flat sheet metal embedded in the walls which carry the hinges, said plates and the hinge leaves having aligning slots, and a flat plate of sheet metal having tongues passing through said slots and overturned to hold the parts together.

In testimony whereof, I affix my signature.

RUSSELL I. RHODES.

Defendant's Exhibit B.

July 10, 1923.

E. B. BICKER

HINGE

Filed April 17, 1922

Fig. 1

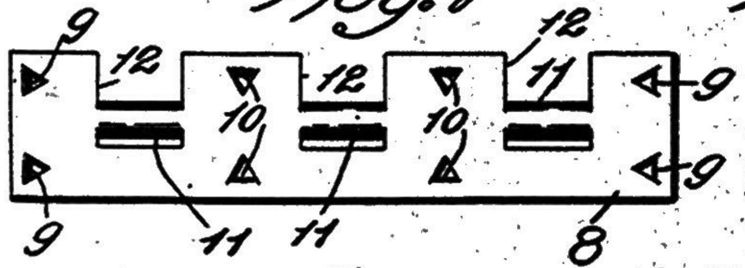


Fig. 2

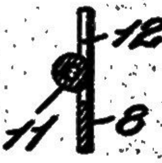


Fig. 4

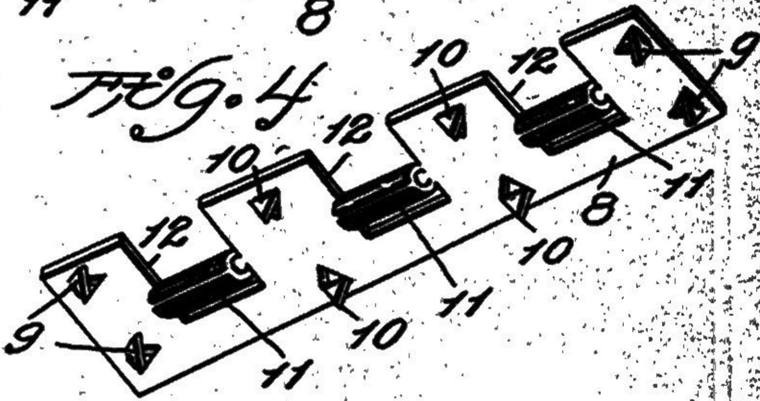
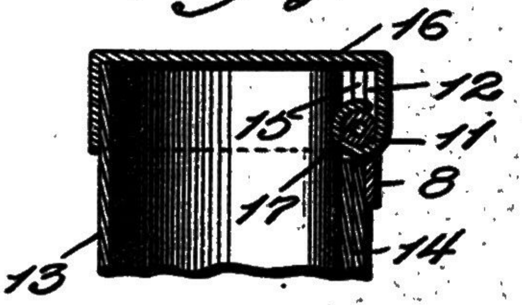
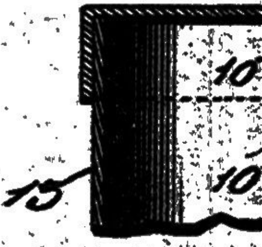


Fig. 5





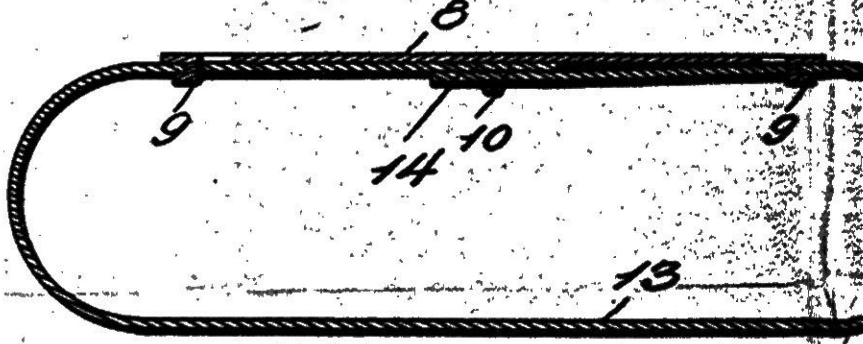


Fig. 7.

INV

EDGAR B.

by

AVAILABLE

Patented July 10, 1923. **1,461,175**

UNITED STATES PATENT OFFICE.

EDGAR B. BICKER, OF ST. LOUIS, MISSOURI.

HINGE.

Application filed April 17, 1922. Serial No. 554,353.

To all whom it may concern:

Be it known that I, Edgar B. Bicker, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have invented a new and useful Hinge, of which the following is a specification.

My invention relates to improvements in hinges, and the object of my invention is to provide a hinge, especially designed for use upon a tobacco can, which is of simple, durable and inexpensive construction and which comprises a plate having integral spurs or teeth which serve to relatively secure certain elements of the can and which plate is provided with integral elements which serve as pintles for the hinging of the lid to the can.

My improvements consist in the novel construction, arrangement and combination of parts as hereinafter fully, clearly and concisely set forth, definitely pointed out in my claims and illustrated by the accompanying drawing, in which—

Fig. 1 is an elevation of a hinge element constructed in accordance with my invention.

Fig. 2 is a transverse sectional elevation taken through one of the pintles.

Fig. 3 is a sectional elevation taken through the connecting teeth.

Fig. 4 is a perspective view of the hinge element shown in Fig. 1.

Fig. 5 is a vertical sectional elevation showing a fragment of a tobacco can, a hinged lid and the plate shown in Fig. 1, taken through a pintle element.

Fig. 6 is a view similar to Fig. 5 taken through the connecting teeth, and

Fig. 7 is a transverse sectional elevation through the can showing the plate and its teeth as a can binding means.

Referring to the drawing, by numerals, 8 designates the body, or plate, of the hinge, which is constructed of a single piece of material, preferably sheet metal, of rectangular oblong shape. Adjacent each end of the plate there are a pair of teeth 9 struck from the plate and turned at a right angle thereto, and within the length of the plate, spaced from the ends thereof, are the teeth 10.

Formed within the length of the plate and integral therewith are the relatively spaced pintles, 11, each of which has a portion of each of its ends connected with the body of the plate and the remainder of each end and both sides freed from the plate, as by slitting, whereby they may be "wired," that is, sectionally bent to form cylinders which serve as pintles for a member to be hinged to the plate. From the one longitudinal margin there are "punched out" the cut outs 12 having depths extending to the pintles and lengths equal to the pintle lengths, which provide for the placement of hinge elements of a member to be hinged to the plate.

As recited I have designed my hinge for use in connection with tobacco cans, especially of the type having a paper body and a metallic lid or cover.

In Figs. 5, 6 and 7 I show the plate as in use on a can, wherein 13 designates the body of the can which comprises a single piece of paper shaped to form an oblong section and having its ends overlapped, to form a seam, such as 14, (Fig. 7).

The upper, open end of the can is provided with "cut outs" 15 which register with the cut outs 12 of the hinge plate.

In practice, after the can has been formed, the can is fitted over a suitable anvil and the hinge plate is fitted along the upper margin of the can with its cut outs 12 in registration with the cut outs 15 of the can, and of course, spanning the seam 14.

By impact the teeth 9 and 10 are then driven through the wall of the can on each side of the seam and clenched so as to serve to reinforce the seam as well as to hold the margin of the can for a length corresponding with a length comprehending the hinge elements so that there will be a minimum of annoyance of scrapping of material incident to inoperative assemblages by non-aligned hinge elements, and to cause the relatively hinged members to freely articulate.

After the hinge plate has been secured as just recited the can lid or cover 16, preferably made of a single piece of sheet metal, cupped, or provided with flanges to overlie the top margin of the can, and having spaced ears 17, is fitted in place and its ears coiled or turned to rotate upon the pintles 11 of the hinge plate.

A distinct advantage arising from the construction as just described is the fact that the assemblage is greatly simplified as the time consuming use of a separate or loose pintle is dispensed with.

Having thus described my invention what

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I claim as new therein and desire to secure by Letters Patent of the United States, therefore, is—

1. In combination with a can having a seam, and a cover having hinge ears, a plate having integral teeth for the securement of the plate to reinforce the seam, there being cut outs in said plate to accommodate said earsand integral, sectionally arcuated pintles spanning said cut outs and around which said ears of the cover are bent.

2. A hinge plate having a marginal cut out, a pintle whose sides are wholly freed from the plate and whose ends are integrally connected with the plate for portions only of its width, and said pintle being sectionally arcuated.

EDGAR B. BICKER.

Defendant's Exhibit C.

April 26, 1927. **1,626,301**

R. I. RHODES

JEWELRY BOX HINGE

Filed Nov. 25, 1924

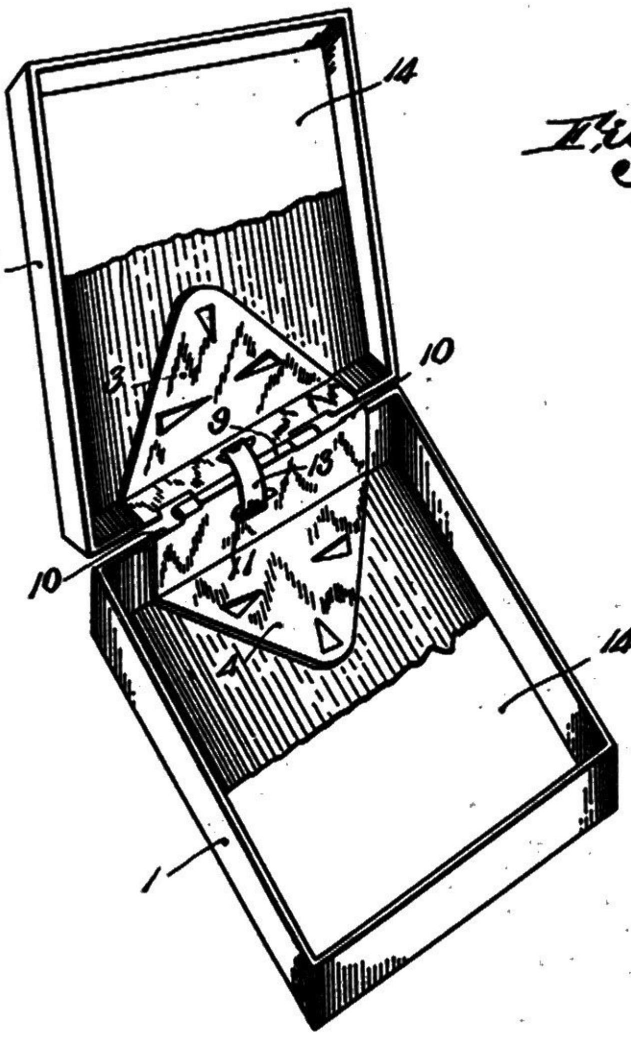


Fig. 1

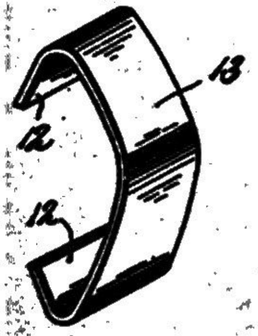
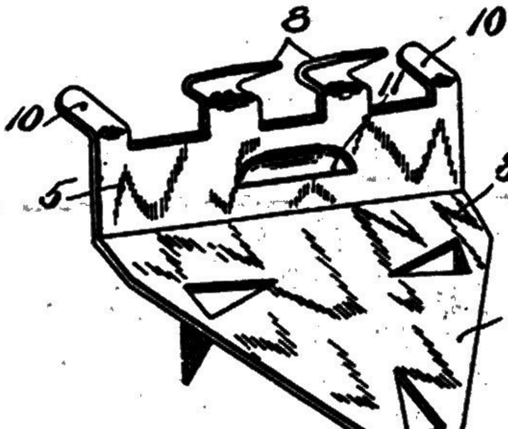


Fig. 3.

Fig. 2



Inventor
Russell I. Rhodes,
by Roberts, Roberts & Cushman
Att'ys.

Patented Apr. 26, 1927. **1,626,301**

UNITED STATES PATENT OFFICE.

RUSSELL I. RHODES, OF NORTH ATTLEBORO, MASSACHUSETTS.

JEWELRY-BOX HINGE.

Application filed November 25, 1924. Serial No. 752,174.

This invention relates to hinges for cases or boxes and particularly jewelry boxes and a principal object of this invention is to provide a durable and reliable hinge for such boxes which is simple in construction, inexpensive to manufacture and has the new and improved features of construction and arrangement hereinafter described.

In the drawings:

Fig. 1 is a perspective of a jewelry box embodying the invention;

Fig. 2 is a perspective of one of the hinge members; and

Fig. 3 is a perspective of the spring.

The preferred embodiment of the invention illustrated on the accompanying drawings comprises a jewelry box having a lower portion or body 1 and a cover or lid 2 which may be constructed of any suitable material such as cardboard, sheet metal or the like. The cover 2 is hinged to the body 1 by a hinge which consists of an upper hinge member 3 connected to the cover and a lower hinge member 4 connected to the body 1, the two members being pivotally connected by intermeshing knuckles.

Each hinge member is formed from a single piece of material such as sheet metal in any suitable manner as by stamping and comprises a leaf 5 which fits snugly against one side of the body of the box, and a plate 6 which extends at substantially right angles to the leaf 5. Struck out of the plate 6 are pointed tongues 7 which are adapted to extend through the material of the box and when bent over securely hold the plate thereto. It will be observed that the plate extends a considerable distance toward the opposite end of the box and by virtue of this construction the strength and durability of the hinge are materially enhanced as the strain on the hinge is distributed throughout a greater area. Such construction also serves to reinforce the box structure, thus increasing its period of usefulness.

Each leaf 5 extends a substantial distance parallel to the walls of the box and is of a width equal to the adjacent wall, the body of the box having a deeper wall than that of the cover so that the leaf connected thereto is slightly wider than the leaf which is connected to the wall of the cover. Integral with the free longitudinal margin of the upper leaf 5 are knuckles or tabs 8 which are bent around a pin, similar knuckles 9 being integral with the lower half and arranged to extend between and on each side of the knuckles 8 thereby pivotally to connect the upper and lower hinge members.

For securely fastening the leaves 5 of the upper and lower hinge members to the adjacent walls of the box cover and body respectively lips 10 are integral with free longitudinal margins of the leaves and are arranged at opposite ends thereof. It will be apparent that by bending the lips 10 over the edges of the cover or box relative movement between the leaves and box structure is prevented. This is particularly advantageous because danger of the box walls to which the leaves 5 are connected being jammed outwardly and crushed is eliminated.

Formed on each leaf 5 between the sides thereof and extending substantially parallel to the pivotal axis of the hinge is a lip 11 formed by extruding a portion of the material. The lips 11 are constructed to receive the hooked ends 12 of a leaf spring 13 which is normally of the shape shown in Fig. 3. When the hinge members are rotated relatively to each other about the pivot from the position in which the box is open to closed position the ends of the spring swing backwardly bending the body of the spring. The bending force is greatest when the cover is in fully closed position and diminishes as the cover opens returning the spring toward its normal shape. The force of compression exerted by the body of the spring whereby the hooked ends of the hinge are pressed toward each other will not tend to open the box when fully closed since the line of pressure is on the inside of the axis of the hinge, but as the box opens the position of the line of compression changes and this compressive force becomes operative to continue the opening movement.

As is customary with jewelry boxes the plates 6 of the hinge members may be covered with a lining 14 of velvet, plush or other suitable material to present a pleasing and attractive appearance.

An outstanding characteristic of this invention consists in the provision of lips on the hinge leaves which serve securely to connect the leaves to the box structure. Another feature consists in the construction and arrangement of the spring which may readily and conveniently be attached and detached without disassembling hinge structure. Owing to the extreme simplicity of construction such spring may be manufactured at a relatively low cost, and by making the spring in one piece and of sturdy material liability of breakage is reduced to a minimum. The fastening prongs as disclosed also contribute to the production of a hinge which is efficient, dependable and durable.

Although I have shown and described a construction which at the present time is the best form known to me, it is to be understood that changes in details of construction and arrangement may be effected without departing from the spirit of the invention especially as defined by the appended claims.

I claim:

1. A hinge for jewelry boxes and the like comprising a pair of pivoted hinge members, each member having a metal base plate of a length to cover a substantial part of the bottom portion or cover portion of the box respectively, and designed to be secured thereto by means penetrating said portions respectively, and a leaf integral with the base plate and extending at substantially right angles therefrom, the edges of said leaves each having at least one outstanding portion bent to form a hinge knuckle and another outstanding ductile portion arranged to be bent over the edge of the box portion to which it is affixed to provide a fastening means at that point which does not penetrate the material of said portion.

2. A hinge element for jewelry boxes or the like comprising a base plate of a length to cover a substantial part of the bottom or cover portion of the box and provided with stuck out prongs to penetrate such a portion at a distance from its edge, and a leaf integral with the base plate and extending at substantially right angles to the same, the edge of said leaf being provided with an outstanding lip bent to provide a hinge knuckle at the side of the leaf opposite said plate in order to lie in substantial alignment with the edge of the box or cover against which the leaf is designed to be engaged, and another lip extending from the same edge of the leaf and adapted to be bent over said edge of the box to compose means for securing the hinge element to the edge of the box without penetrating the same.

Signed by me at North Attleboro, Massachusetts, this 21st day of November, 1924.

RUSSELL I. RHODES.

Defendant's Exhibit D.

July 9, 1940. **H. K. POWELL** **2,206,918**

BOTTLE HOLDER

Filed May 5, 1938

Fig. 1.

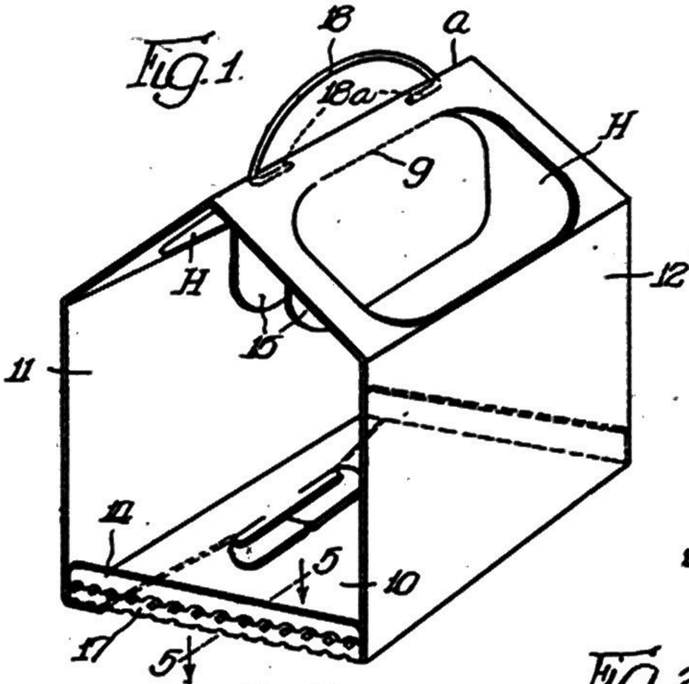


Fig. 3.

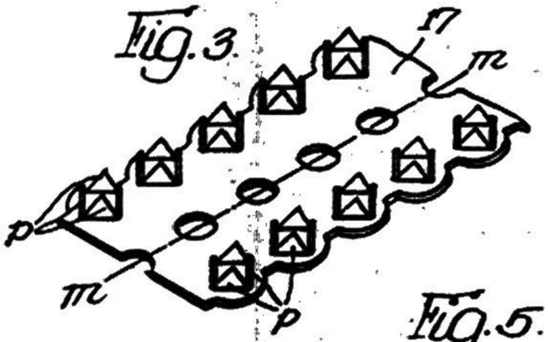


Fig. 5.

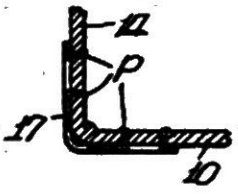


Fig. 4

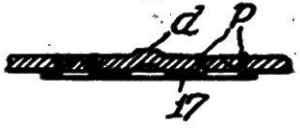


Fig. 2.

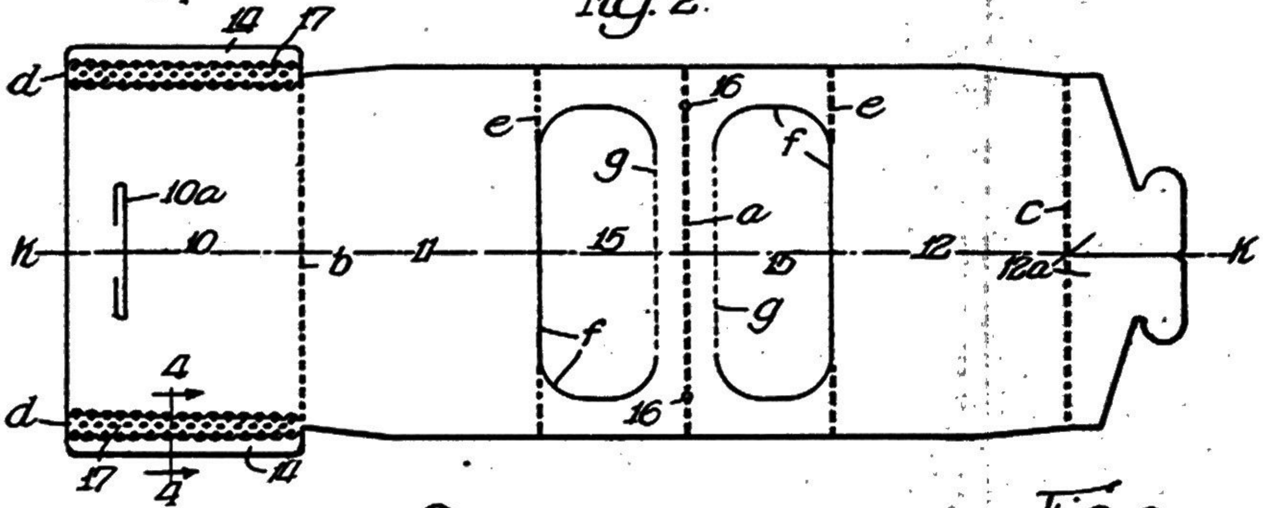


Fig. 6.

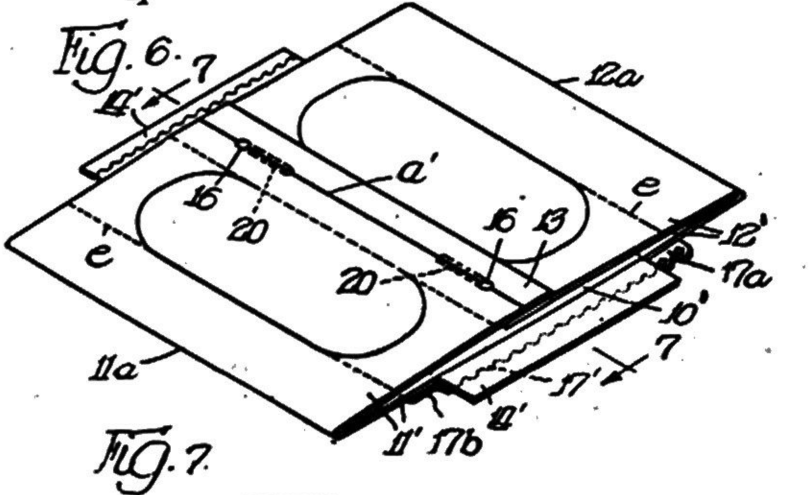


Fig. 8

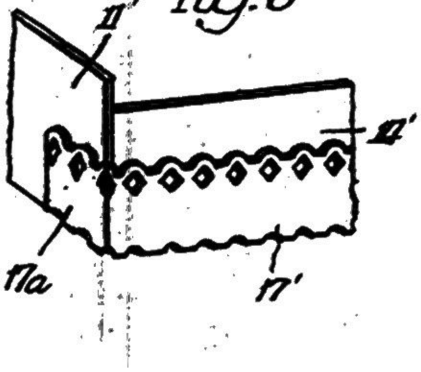
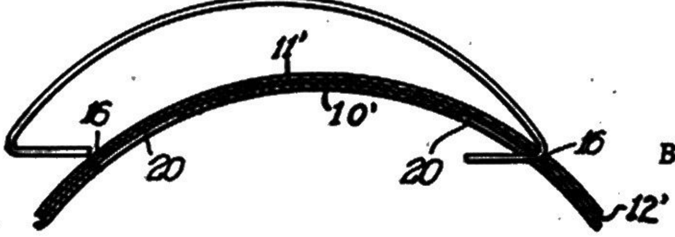


Fig. 7.



INVENTOR.
Henry K. Powell.
BY Cromwell, Greist & Warden
ATTORNEYS.

Patented July 9, 1940 **2,206,918**

UNITED STATES PATENT OFFICE

2,206,918

BOTTLE HOLDER

Henry K. Powell, Chicago, Ill.

Application May 5, 1938, Serial No. 206,127

11 Claims. (Cl. 229—49)

This invention relates to containers for the packaging of a plurality of bottles or the like in a fashion such as to permit their being carried conveniently.

One of the objects of the invention is the provision of such an article which may be made throughout of inexpensive materials, for the most part of material such as paper board, and which may be fabricated very economically so that it may be supplied to the users in quantities at a very low price per unit.

Another object is to provide a container of the sort above indicated which may be packaged in flat collapsed condition so that it occupies but little space, for storage or for shipment to the user, and may be set up by the user without requiring any special or additional apparatus or fastenings.

Another object is the provision of such a container which will properly hold its shape in set-up condition, will securely retain the bottles or other articles which it is designed to carry, and will permit them to be removed and put back in it, when desired, and without involving any dismantling or mutilation of the container.

Other and further objects of the invention will be pointed out or indicated hereinafter, or will be apparent to one skilled in the art upon an understanding of the subject matter of the invention or its employment in use.

For purpose of aiding in an explanation of the invention, I show in the accompanying drawing forming a part of this specification, and hereinafter describe, certain forms in which it may be embodied. It is to be understood, however, that these are presented merely for purpose of illustration and are not to be construed in any fashion for the purpose of limiting the appended claims short of the true and most comprehensive scope of the invention in the art.

In said drawing,

Fig. 1 is a perspective view of one form of bottle holder or bottle carrier constituting an embodiment of the invention, showing same in its set-up condition ready for reception of its contents;

Fig. 2 is a plan view illustrating the form of the blank from which the article shown in Fig. 1 is formed;

Fig. 3 is a detail in the nature of a perspective view of a portion of a stay element employed in the construction illustrated in Fig. 1;

Fig. 4 is a sectional view, on an enlarged scale, such as taken on the line 4—4 of Fig. 2 but in inverted position;

Fig. 5 is a section such as taken on approximately line 5—5 of Fig. 1;

Fig. 6 is a perspective illustration of another embodiment of the invention, showing it in flat or collapsed condition;

Fig. 7 is a sectional view of same such as taken on line 7—7 of Fig. 6 but showing it in abnormal position to which it is flexed for the purpose of inserting the handle; and

Fig. 8 is a detail in the nature of a fragmentary perspective of a corner portion of a set-up container of the character illustrated in Fig. 1 but showing a modified feature.

An understanding of the invention may be most quickly had from a description of the illustrative embodiments shown in the drawing.

Fig. 2 illustrates a form of blank which is cut from suitable sheet material, such as paper board, said blank being provided with crease lines *a*, *b* and *c* which subdivide it into a bottom panel 10, side panel 11 and side panel 12, the latter having an extension comprising a pair of abutting locking tongues 12*a*, which are formed with hooks at their outer ends. The panel 10 is provided with a slot 10*a* adapted to receive the hook portions of said tongues, when they are overlapped one upon another to a sufficient extent, but being shorter than the overall or aggregate width of said hook portions, so that they will interengage with the end portions of said slot when the tongues are in abutting relationship with each other after such insertion.

At the ends of the bottom panel 10 are provided end strips 14 which extend from crease lines *d* along the end margins of the bottom panel.

The side panels 11 and 12 are creased transversely at *e* and are slit along the solid lines *f* to form apertures H (see Fig. 1) which are normally occupied by tabs 15 that remain conjoined with the side panels along crease lines *g* parallel with the crest crease line *a* upon which are formed the handle holes 16.

Applied to one side of the bottom panel across the crease lines *d* are stay elements 17. The type of stay elements here illustrated, and as shown more clearly in Figs. 3, 4 and 5, comprises a strip of suitable sheet metal of suitable strength and stiffness, yet which may be bent to assume the desired form, as to right-angle form along its median line *m*—*m*. On either one or both sides of its median line it is provided with points or prongs *p* which may be driven into the paper board and clenched to a greater or less extent, as illustrated in Fig. 4, thus securing the stay element 17 against the outer surface of the bottom panel and end strips so that it extends across the fold crease *d*. As seen in Fig. 4, this fold crease preferably is made by displacing a narrow area of the sheet from the plane thereof in the direction away from the side to which the element 17 is applied.

A suitable handle is provided, that illustrated being formed of a piece of stiff wire which is bent to afford a bail portion 18 which has at its ends inwardly directed journal portions 18*a* in alignment with each other. The distance between the outer extremities of the journal portions 18*a* is approximately equal to the spacing of the handle holes 16, and hence the space between the adjacent ends of the journal portions 18*a* is considerably less than the distance between said handle holes.

For packaging the containers for storage or shipment to the user, they are stacked one upon another in the flat form shown in Fig. 2 and made up into bundles, thus each occupying but a very small space. The handles are shipped in suitable containers.

For the setting up of the container, it is taken in its flat form as shown in Fig. 2 and is bowed or arcuately flexed transversely, viz., around the median line K, until the handle holes 16 are brought closely enough together to permit the insertion of the ends of the handle journals 18*a* through them. When the journals have been so inserted, the flexed blank is released, and springs back to its flat condition, thereby securely locking the handle to it, yet permitting the handle to swing or rock. The end strips 14, together with the portions of the stay element 17 which overlap them, are then flexed into perpendicular or right angular relationship to the bottom panel 10, as illustrated in Fig. 5. The form of the fold crease *d* facilitates this bending of the paper board sheet without fracture of it, and the stay element 17 is adapted to be bent to the proper form by virtue of its ductility. However, it has the proper amount of inherent strength or stiffness to require the application of considerable pressure to bend it, and consequently tends to retain its bent form and support or stay the end strip 14 in the desired upright position. The blank is then bent on the crease lines *a* and *e*, and then on the crease lines *b* and *c*, to a relationship in which the side panels 11 and 12 are brought into approximately perpendicular relationship to the end panel 10 and along its opposite side margins, and the tongues 12 are flexed inwardly against the under surface of the bottom panel, and then overlapped one upon the other and inserted through the slot 10*a*, after which insertion of their hook portions they are restored to their collateral or abutting relationship. Thus the side panel 12 is interlocked with the bottom panel 10, so that the container, in its set-up condition, as shown in Fig. 1, has sides 11 and 12 extending upwardly from the bottom 10 and thence in an upwardly converging relationship to the crest line *a*. The bottles or other articles are introduced through the lateral apertures H which are afforded by bending the tabs 15 inwardly along the crease lines *g*. The device here shown is designed to hold six bottles in two rows of three each. The first two bottles introduced through each of the apertures H are moved to the ends of the apertures, and a third bottle is then inserted between them. When so disposed, the bottles are held definitely against falling out of the receptacle, as the upstanding strips 14, which are held and braced securely by the stay elements 17, prevent the bottoms of the bottles from sliding out, while the portions of the side panels at the ends of the apertures H contact the necks or upper portions of the outer bottles in each row and prevent their toppling outwardly.

Accordingly, the group of bottles may be carried very conveniently and securely by the handle bail 18. Bottles may be removed and replaced as desired, provided the middle bottle is always removed first. The container does not have to be distorted or mutilated in any manner for such removal of the bottles, and it retains its proper set-up form after one or all of them are removed, hence continuing to serve as a convenient repository for the empty bottles.

In the modified construction shown in Fig. 6, the side panels 11′ and 12′ are left integrally conjoined with the opposite side margins of the bottom panel 10′ which has suitable end strips 14′ along its end margins. The upper end portions of the side panels are overlapped, as shown at 13, and permanently secured to each other by an adhesive so that both extend across the crest crease line *a′*. The side panels are provided with additional crease lines 11*a* and 12*a*, so disposed that the upper portions of said panels may be folded down flat upon the inner or upper surface of the bottom panel 10′ and the lower portions of said side panels, as illustrated in Fig. 6. To accommodate the introduction of the handle into the handle holes 16, as above described, the bottom panel is provided with slots 20, adapted to underlie and align with the handle holes 16 when the container is in the collapsed form and said slots 20 are of sufficient length to accommodate passage of the journal portions 18*a* of the handle. Consequently, for insertion of the handle, the collapsed container is bowed or flexed, as illustrated in Fig. 7, the handle journals inserted through the openings 16 and 20, and then the container is released to resume its normally flat form. Then the side panels are flexed upwardly away from the bottom panel to the upright or perpendicular relationship, and the end strips 14′ are turned up to their upstanding position. Of course, with this type of collapsible body portion, the end strips 14′ may be of any of various kinds and various arrangements made for holding them in their upstanding position, the stay elements such as illustrated in Fig. 1 being only one of such various arrangements. This modified construction has the various advantages above described, but due to the presence of the additional creases 11*a* and 12*a*, does not maintain its straight upstanding form so staunchly as does the embodiment shown in Fig. 1. To make up for this deficiency, and afford the side panels additional support, the stay members may be extended at the ends of the end strips 14′, viz., either the part which overlaps the end strip may be extended as at 17*a* or the part which overlaps the bottom panel may be extended as at 17*b*, or both may be extended in separated condition, so that they project beyond the outer sides of the side panels when the latter are in upstanding position. Accordingly, after the panels and end strips are flexed to the upstanding positions, these extending end portions, which are designated 17*a* in Fig. 8, may be bent into supporting engagement with the outer surfaces of the side panels, as shown in Fig. 8, and in that position serve to brace or stay the side panels in their upright positions. In this modification, as in the form shown in Fig. 1, the end strips, when in their upstanding position between the side panels, act as spacers or stays which brace the lower portions of the side panels against bending toward each other. In addition to bracing or staying the end strips, the stay elements, when of the character illustrated in Figs. 1 and 2, perform the further important function of stiffening the bottom panel transversely, so as to resist any tendency of it to bow or sag under the weight of the contents.

Certain subject matter herein described or shown but not defined in the following claims is claimed in my co-pending applications Serial No. 196,230, filed March 16, 1938, and Serial No. 271,827, filed May 5, 1939, both for improvements in Bottle holders.

What I claim is:

1. A knock-down container for carrying a plurality of bottles or the like, comprising a sheet of paper board creased to form a bottom panel and side panels adapted to be flexed to upstanding positions at the side margins of the bottom panel and end strips adapted to be flexed to upstanding positions at the end margins of the bottom panel, said side panels being of greater height than said end strips and being provided at their upper ends with a handle whereby the container may be carried, and stay members attached to the bottom panel for cooperation with the end strips to sustain them in upstanding positions to serve as retaining abutments for bottles resting on the bottom panel.

2. A knock-down container for carrying a plurality of bottles or the like, comprising a sheet of paper board creased to form a bottom panel and side panels and end strips all in one piece, said side panels and end strips being flexible to upstanding positions at the respective side and end margins of the bottom panel and the side panels being of greater height than the end strips, said side panels being provided at their upper ends with a handle whereby the container may be carried, and stay members attached to the bottom panel and end strips to sustain the latter in upstanding positions.

3. A container as specified in claim 1 and wherein said stay members include portions for cooperation with the side panels to brace them against flexing outwardly adjacent the bottom panel.

4. A container as specified in claim 1 and wherein said end strips form spacers between the side panels and said stay members include portions for cooperation with the side panels to retain them in abutment with the end strips.

5. A container as specified in claim 2 and wherein said stay members are in the form of relatively stiff metal cleats extending across the crease lines between the bottom panel and end strips and bendable with the end strips along said crease lines into angular cross-sectional form.

6. A container as specified in claim 2 and wherein staid stay members are in the form of relatively stiff metal cleats extending across the crease lines between the bottom panel and end strips and bendable with the end strips along said crease lines into angular cross-sectional form, said stay members extending also transversely of the bottom panel and serving to stiffen it against flexing.

7. A container as specified in claim 2 and wherein said stay members are in the nature of relatively stiff metal tie strips extending across the crease lines between the bottom and side panels and secured to the panels at each side of said crease lines, and the crease lines are formed by narrow portions of the sheet offset away from the stay members and the stay members being bendable with the end strips along said crease lines into angular cross-sectional form.

8. A container for carrying bottles or the like comprising a sheet of paper board creased to form a bottom panel and side panels adapted to be flexed to upstanding positions at the side margins of the bottom panel, said side panels being provided at their upper ends with a handle whereby the container may be carried, and relatively stiff metal stay members fastened to the bottom panel and adapted to be bent to upstanding positions at the ends thereof.

9. A container as specified in claim 8 and wherein said stay members have end extensions adapted to be bent into engagement with outer surfaces of the side panels to brace their lower portions in upstanding positions.

10. A knock-down container as specified in claim 2 and wherein said side panels are provided in their upper portions with apertures through which bottles may be inserted and withdrawn to and from positions wherein they stand upright on the bottom panel.

11. A knock-down container as specified in claim 2 and wherein said side panels have upwardly converging upper portions which are connected to each other and provided with apertures through which bottles may be inserted and withdrawn to and from positions wherein they stand upright on the bottom panel while said upper portions remain connected.

HENRY K. POWELL.

Defendant's Exhibit F.

(Mailed Sept. 14, 1950.)

DMB/ec PAPER No. 8

DEPARTMENT OF COMMERCE
United States Patent Office
Washington

Please find below a communication from the EXAMINER in charge of this application.

JOHN A. MARZELL
Commissioner of Patents.

Barlow & Barlow
2005 Industrial Trust Bldg.
Providence, R. I.

Division:	40
Applicant:	Lewis Douglas Young
Ser. No.	69,301
Filed	Jan. 5, 1949
For	CARDBOARD BOX SPRING HINGE

Responsive to letter filed March 15, and amendment filed June 29, 1950.

Claims 1 to 5 are rejected as unpatentable over either the patent to Rhodes 1,626,301 or Rhodes 1,430,029 both of record in view of Powell which shows applicant's manner of securing a flexible metal plate to a cardboard wall. Each of the patents to Rhodes shows a cardboard box formed of a body section and cover section each having vertically disposed rear walls with their edges abutting. The inner surface of the rear wall of each section has a flexible metal plate secured thereto. To employ the teaching of Powell for securing these plates to the rear wall of each section of the cardboard boxes of Rhodes would amount to the mere substitution of one well known plate securing means for another, would produce no new or unobvious result and would not require invention. Further, Bicker shows it to be old to secure a metal hinge plate to a cardboard wall by means of struck out pointed projections which are clenched into the wall.

The above rejection is FINAL.

Examiner

Defendant's Exhibit G.

(Mailed May 8, 1951.)

PAPER No. 13

DEPARTMENT OF COMMERCE
United States Patent Office
Washington

Bockenek:geh

In re application of Lewis Douglas Young.
Ser. No. 69,301
Filed Jan. 5, 1949
For CARDBOARD BOX SPRING HINGE

Appeal No. 26,3
Before the Bo
of Appeals.

BARLOW & BARLOW FOR APPELLANT

Examiner's Statement.

This is an appeal from the final rejection of claims 1 to 5, inclusive, the only claims in the case.

A copy of the appealed claims appears on page 1 of applicant's brief. An error is noted in line 4 of claim 1, wherein the comma (,) should be omitted.

The references relied on are:

Bicker	1,461,175	July 10, 1923
Rhodes	1,430,029	Sept. 26, 1922
Rhodes	1,626,301	Apr. 26, 1927
Powell	2,206,918	July 9, 1940

The invention and the references are adequately described in the applicant's brief.

Claims 1 to 5, inclusive, were rejected as unpatentable over Rhodes 1,626,301 or Rhodes 1,430,029 in view of Powell as set forth in the Office action of September 14, 1950. It is believed that the claims were properly rejected.

Examiner, Division 40

Barlow & Barlow,
2005 Industrial Trust Bldg.,
Providence, R. I.

Defendant's Exhibit H.

(Mailed May 15, 1951.)

Paper No. 16

Appeal No. 26,324
Hearing:
April 26, 1951

RS

IN THE UNITED STATES PATENT OFFICE

Before the Board of Appeals

Ex parte Lewis Douglas Young

Application for Patent filed January 5, 1949, Serial No. 69,301. Cardboard Box Spring Hinge.

Messrs. Barlow & Barlow for appellant.

This is an appeal from the final rejection of claims 1 to 5, inclusive. No claims have been allowed.

Claim 1 is illustrative of the rejected claims and reads as follows:

1. In a cardboard box a body section and a cover section each section having vertically disposed rear walls with their edges abutting, a flexible plate extending along the inner surface of the rear wall of each section each plate having a plurality of holes along its length with a plurality of projections from the edge of each hole embedded in the rear wall over which the plate extends with the free ends of the projections deflected in a plurality of different directions to clinch over the outer surface of the rear wall of the section and firmly secure the plate to the section, and

Defendant's Exhibit H.

means to hingedly attach said plates together throughout the major portion of their length.

The references relied upon are:

Rhodes	1,430,029	Sept. 26, 1922
Bicker	1,461,175	July 10, 1923
Rhodes	1,626,301	April 26, 1927
Powell	2,206,918	July 9, 1940

The claimed subject matter relates to a cardboard box provided with a pair of hinge members fastened on the inside rear walls of the body section and cover. The details of the fastening and hinge devices are apparent from a reading of the claim.

The claims have been rejected as unpatentable over either of the Rhodes patents in view of Powell. Rhodes 1,430,029 shows a hinge connection for a box, including hinge leaves and a U-shaped member C, the ends of which extend through apertures in the hinge leaves and are bent over as shown at 6c and 2b. Rhodes 1,626,301 shows a box hinge made up of members 3 and 4 provided with struck out tongues 7 which pierce the material of the box and are bent over. This patent also shows a spring holding member. The pertinent portion of Powell, shown in Figs. 3, 4 and 5, is a stay element 17 having a plurality of apertures and points or prongs p used for fastening the stay element to the cardboard of the container. The points or prongs which are clenched to a greater or less extent are illustrated in Fig. 4. Bicker was cited to show a hinge member attached to a container by means of struck out prongs 10.

The Examiner's view is that to employ the teaching of Powell for securing the hinge plates of the Rhodes patents to the wall of each section of the cardboard box would amount to the mere substitution of one well known plate securing means for another, would produce no new or unobvious results and would not require invention.

Defendant's Exhibit H.

Appellant points out that prior art devices as represented by the Rhodes patents made use of heavy hinge members attached to the cardboard boxes by heavy bent over prongs or by a separate U-shaped member which pass through the wall of the box and the hinge member and was then bent over. The objection to this arrangement was that the hinge plate was of such strength that it did not bend within itself but rather worked at one point or another point of attachment on the box when tortional strains existed between the hinge and the box tending to tear the hinge from the box. Appellant states that he has devised a hinge member of light weight material which may be attached to the box in a manner similar to that shown in Powell. Appellant utilized the stiffness of the box to make up the lack of stiffness heretofore always considered necessary in a hinge plate to make up the required stiffness by using the two together. This is said to have many advantages, among them the improvement in appearance by elimination of heavy spurs at the back of the box.

We have carefully considered the arguments that have been advanced but we are in agreement with the Examiner's view. We do not think it may be seriously contended that Powell's mode of fastening the flexible metal strip to the cardboard panel is materially different from that defined in the claims on appeal. The reference shows a flexible metal strip having a plurality of holes and a plurality of projections from the edge of each which are bent over to a small point. Powell does not show a hinge structure but we are not convinced that the adoption of the disclosed fastening for use with metal hinge plates or strips involves more than the exercise of choice. The characteristics and advantages of the fastening are apparent in the reference, in which there is shown a minimum of prong projections. We do not think that invention would be called upon in recognizing that the advantages resident in Powell may be availed of in fastening flexible hinge members to a box body and cover. Appellant contends that the relatively light metal plate of

Powell could never serve as a hinge but in this connection the claims merely recite a flexible plate and this is disclosed in the reference. We think the Examiner's rejection was proper and it will be sustained.

The decision of the Examiner is affirmed.

In event of appeal attention is directed to *In re Boyce,* 32 C. C. P. A. 718; 144 Fed. (2nd) 896; 1944 C. D. 609; 568 O. G. 568; 63 U. S. P. Q. 80 in regard to specifically including in the appeal notice *all* grounds of rejection in the Examiner's Statement not expressly overruled by the Board.

MARK TAYLOR
Examiner-in-Chief

M. W. TUCKER
Examiner-in-Chief
(Acting)

C. S. DUNCOMBE
Examiner-in-Chief
(Acting)

Board of Appeals

May 15, 1951

Messrs. BARLOW & BARLOW,
2005 Industrial Trust Bldg.,
Providence, Rhode Island.

BRIEF FOR APPELLANT.

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT.

FILED FEB 5

Appeal No. 11632.

LEWIS DOUGLAS YOUNG,
Appellant,

v.

JOHN A. MARZALL,
Commissioner of Patents,
Appellee.

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA.

CLARENCE M. FISHER,
834 National Press Building,
Washington, D. C.,

HERBERT B. BARLOW,
2005 Industrial Trust Building,
Providence 3,
Rhode Island,

Counsel for Appellant.

Question for Decision.

The question is whether the Plaintiff has made a patentable invention by improving the construction of a cardboard box comprising body and cover sections attached by a spring actuated metal hinge, the important elements having been known for over thirty years although never brought together in Plaintiff's novel grouping.

Parties.

LEWIS DOUGLAS YOUNG,
Plaintiff-Appellant,

JOHN A. MARZALL, Commissioner of Patents,
Defendant-Appellee.

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IN THE

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA.

LEWIS DOUGLAS YOUNG,
Appellant,
v.
JOHN A. MARZALL, Commissioner of Patents,
Appellee.

Appeal No. 11632.

BRIEF FOR PLAINTIFF-APPELLANT.

Jurisdiction.

This is an action brought in the court below under the provisions of Revised Statute Section 4915 (Com. Statutes 9460 Title 35 Section 63 as amended, or since January 1, 1953, Title 35 Section 145) which was pleaded in paragraph 1 of the "Complaint for Issuance of Letters Patent" (Tr. 117 App. 1). Appellant's appendix will be referred to as "Appendix" and designated "App.", while the Transcript will be designated "Tr.".

Section 1294 of Title 28 U. S. C. provides for an appeal to this court.

Statement of the Case.

The subject matter of this suit relates to a cardboard box with a metal spring hinge. The box, as shown in Exhibit 1, App. 89, comprises two shooks, one a body section 10 and the other a cover section 11. As manufactured they are covered with a fancy paper or fabric by a machine (Tr.

82 App. 62). The back wall 12 of the body and back wall 13 of the cover after they have been covered with the fancy paper or fabric are to be assembled in edge-to-edge meeting relation and the hinge 14 thereafter applied.

The hinge 14 has two identical rectangular metal plates 15, 16 with eyes 17, 18 rolled on the edge of each plate. The eyes on one plate are staggered with the eyes on the other plate, and these eyes are aligned. A pintle 19 is held in the eyes of the plates, providing a hinge pivot. Appellant purchases strips or plates of extended length hinged together with a pintle and provides the length of hinge to be used by cutting off the length of such assembled strips or plates as he desires. He then with his own tools provides his special attaching means (Tr. 42, 43 App. 34). Appellant alters each of the hinged metal plates to form spaced holes 20 through them with a number of small prongs 21 located about each opening projecting at nearly right angles to the plate for attaching purposes and also provides lips 24 for a spring. A C-shaped spring 25 engaging both plates controls the swinging of the plates on the hinge pivot, urging them to either open or closed position. The back wall of the fancy paper or fabric covered body and the back wall of the fancy paper or fabric covered cover are positioned in close proximity. The two hinge plates 15, 16 complete with hinge pintle 19 and spring 25 are laid with the prong side engaging the inside of the back walls and then struck with a hammer blow backed up by an anvil to drive the prongs into the back walls and head them over so that the body and cover become hinged together. As this is the final operation, the box is then complete and finished.

While finding that the Appellant's box was an improvement and recognized in the trade as such and that there had been a pirating of the Appellant's idea, the lower court nevertheless held that the combination of features which made Appellant's box an improvement and which caused it to be pirated by his competitors did not rise to the dignity of invention and was not patentable in view of the patents to Rhodes, Bicker, and Powell.

Rhodes 1,430,029 discloses a metal reinforcement on the outside of a cardboard box through which a separate U-shape staple passes to hold a hinge in place.

The second Rhodes patent 1,626,301 shows an L-shape plate fixed by heavy unsightly protruding spurs to the top wall and bottom wall of a cardboard box with fingers extending over the edges of the back walls of the top and bottom section to hold it in place. A multiple operation and complicated assembly.

Bicker 1,461,175 shows an anchor plate to pivot fingers of a cover. It is not an applied hinge and can not be spring actuated.

Powell 2,206,918 shows a rigid angle iron to make and reinforce a corner of a cardboard bottle holder with prongs entering the walls to secure it in place.

These patents and the manner in which they differ from Appellant's box are further discussed in detail later on in the argument.

The Invention.

Appellant's invention is in the concept of the use of rosette type fastening for use on a spring-actuated metal hinge for a cardboard box. It had tremendous advantages over what had preceded it. The prongs project from the inside out but being a number of small prongs, are almost unnoticeable from an appearance standpoint, which is of importance in the fancy box business.

The small curved prongs being located in many directions (Tr. 47 App. 37) about the circular openings in the plate practically integrate the plate with the back wall so there can never again be relative movement between the two (Tr. 38, 46 App. 31, 36). The plate may be made of lighter weight or thinner material than hinges heretofore since it is stiffened by the cardboard back wall and conversely the back wall may be thinner than heretofore since it is stiffened by the plate which substantially becomes one therewith (Tr. 46 App. 36).

A typical claim follows:

> 1. In a cardboard box a body section and a cover section each section having vertically disposed rear walls with their edges abutting, a flexible plate extending along the inner surface of the rear wall of each section, each plate having a plurality of holes along its length with a plurality of projections from the edge of each hole embedded in the rear wall over which the plate extends with the free ends of the projections deflected in a plurality of different directions to clinch over the outer surface of the rear wall of the section and firmly secure the plate to the section, and means to hingedly attach said plates together throughout the major portion of their length.

Statement of Points Relied On.

The essential error is with respect to Finding 9, which states that Appellant's combination of features old in the prior art does not rise to the dignity of invention, and Finding 10, which states that the claimed structure does not define invention in view of the prior art. These Findings are clearly against the weight of evidence which does show invention to be present over the prior art in the claimed structure.

Summary of Argument.

The cardboard box industry has up to the time of this invention never had a good spring hinge for a box.

The Appellee admits that what Appellant has done is new or novel. The court below said time and time again that it is an improvement and made a finding to that effect (Finding No. 6).

The Primary Examiner, who held (Exhibit F App. 113) there was no invention, is not an experienced box maker. Experienced box makers and even a competitor of Appellant's paid high tribute to the invention.

There is no evidence in the record to support the Court Findings 9 and 10. On the contrary, the evidence affirmatively establishes that Findings 9 and 10 are wrong, and invention is involved.

Appellant has presented to the industry a better spring hinge box than anything before and at a lower cost, better in structural strength and performance, and better in appearance.

The box trade has floundered around with complicated structures for years. Appellant's presentation, doing a better job at lower cost, is so simple it seems almost incredible.

The invention has filled a long-felt want in the trade. There has been pirating or copying by a number of competitors.

This Court and the Supreme Court has said time and time again that the above combination of circumstances sums up to invention.

Argument.

The Prior Art.

Before the advent of Appellant's invention, a *metal* hinge with a C-shaped spring was first applied to hinge a box having duplicate *metal* body and *metal* cover sections, each formed by drawing or striking a piece of metal to give it curved corners as exemplified in Exhibit 2. It was first thought that the strength provided by metal sections was necessary to give sufficient rigidity for a spring hinge. The covering on such a box had to be of fabric, as paper could not be drawn smoothly about the curved corners (Tr. 15 App. 13).

In 1922 Rhodes obtained patent 1,430,029, Exhibit A (App. 95), showing a cardboard box with a metal hinge. Reinforcing metal frames were applied to the outside and showed on the outside of the box, half way about its top and bottom edge. The structure was exceedingly complicated, and the box was not commercial (Tr. 17 App. 14, 15). In 1927 Rhodes secured another patent No. 1,626,301, (Exhibit C. App. 103) showing another form of hinge for a cardboard box. This box also was not commercial (Tr. 100 App. 74), and it was impractical to construct. Each plate had to be tailored to the particular depth of box upon which it was used (Tr. 21 App. 17). There were many disadvantages as to appearance. The ugly prongs on top and bottom interrupted a smooth surface and were unsightly (Tr. 20 App. 16, 17). It never appeared on the market (Tr. 19 App. 16).

In 1923 Bicker obtained patent 1,461,715 (Exhibit B, App. 99) for an anchor for pivotally mounting a box cover. It is referred to as a hinge although upon examination it will be seen that there is not a hinge (Tr. 77 App. 58) in the sense in which the term is used in the Appellant Young's application. Bicker has a *single* plate secured on the *outer* surface of a cardboard box and provided with openings. The cover has fingers which are passed through these openings and rolled to pivotally mount the cover. There is no pintle pin. It is impossible that a C spring be used in the construction shown (Tr. 78 App. 58). There are not two plates which are pivoted together to swing one relative to the other and which as a unit are attached to cover and body sections as in the present application here for consideration. The Bicker construction never appeared on the market.

More recently and something in the order of five years ago another box of cardboard with a metal hinge appeared on the market, which is in evidence as Exhibit 3 with the metal reinforcement in evidence as Exhibit 4. This was a complicated structure tailored to each size box and utilized the same manner of attaching a hinge to the metal reinforcement as was disclosed in the all-metal box, Exhibit 2. Soon after Exhibit 3, there appeared on the market the Atlas hinge and box in evidence as Exhibit 5 where there was a reinforcing metal plate secured to the back wall of a cardboard box and a metal hinge was secured to the metal reinforcement in the same manner as was shown in the all-metal box, Exhibit 2, or the box of Exhibit 3.

The Powell patent 2,206,918 (Exhibit D, App. 107) was issued July 9, 1940, and shows a special use of a corner stay, an old type of corner stay itself being disclosed in flat form in perspective in Fig. 3 of this patent. This corner stay for years has been a stock item. It was not new at the time Powell filed his application for a patent to have a corner stay such as he has shown. In fact, Mr. Young has testified (Tr. 48 and App. 37) that a metal strip for use as a corner stay such as shown in Powell or in Exhibit 19 or in patent Escobales 1,703,522 dated Feb. 26, 1929 (Exhibit 21, App. 91) was over fifty years old and was known to him at least fifteen or twenty years before his father died (who was also in the box business) and his father has been dead thirty-one years (Tr. 48 App. 37); the Escobales patent 1,703,522 was apparently granted because of a particular arrangement of the holes in the corner stay, and the Powell patent was granted because of a particular arrangement of the corner stay in a bottle carrier, although, as we have said above, the corner stay was old as applied to the corner of a box fifty years before, and long before the advent of either of the inventions shown in the Escobales or Powell patents. Apparently, the Patent Office in considering these corner stay applications felt that a particular use of an old corner stay taken bodily from the prior art was patentable. (Appellant did not take the corner stay bodily.)

This corner stay, which is long known in the trade, is a very light piece of metal which does not have much strength, Exhibit 19. If it is bent sharply back and forth upon itself through 180 degrees in hinge-like fashion, two bends will break it (Tr. 56 App. 43). It is designed particularly to be easily cut off between the locations of its attaching prongs and for this purpose is always provided with a *scalloped edge* with the holes from which the attaching prongs project usually located well out toward this edge with a very narrow margin of material along the edge about the opening. This scalloping of the edge forms a very weak construction and has little strength against lateral bending. This is an item that all box makers are familiar with for making a cheap set-up box with no paper cover where a metal stay on the outer surface at the corner of the box forming an angle iron is not objectionable. The stay is inherently unsightly and always is on the *outer* surface of the box (Tr. 54 App. 42) where it shows. The box maker never thinks of the appearance of the prongs, as they are hidden inside of the box. No covering problems of paper or fabric are present. After this angle iron stay is attached, it remains rigidly in this position. It takes the place of a paper or cloth stay for a more rigid corner.

The record shows that metal hinges were applied to cardboard boxes for over thirty years and that the corner stay, such as Exhibit 19 and such as in the Powell patent, has been in existence in the box making trade for over fifty years. These two things existed side by side in the cardboard box industry for this length of time, and yet such skilled persons as Young, Thurston, or Rocheleau, never thought of using the corner stay prongs for a hinge. In fact, the trade did not think of applying a metal spring hinge *directly* to the back wall of a cardboard box until this happy thought was conceived by Mr. Young.

All these structures were prior to the advent of Young's invention.

Trade Lacked a Good Spring Hinge.

One of Appellant's competitors under cross examination testified that the trade had never had a good spring hinge (Tr. 98 App. 72, 73).

> "... but then we have never had a good attaching for a hinge ..."

The Appellant's Conception.

In examining the Atlas box, Exhibit 5, Appellant Young thought of eliminating the separate reinforcing metal plate and attaching each of his hinge plates, which were pivoted together to form an assembled hinge, directly to the inner surface of the back wall of the cardboard box by the use of flat triangular prongs. He cut out from a piece of paper a specimen, Exhibit 6, to show this structure and had the Atlas people make it up for him, Exhibits 7 and 11. This was a much more simplified form from anything that had gone before and more practical. He had orally arranged with the Atlas people to make up this hinge *exclusively* for him (Tr. 29 App. 23, 24). Mr. Young found, however, that Atlas was not keeping to their exclusive agreement (Tr. 30 App. 24), and during his meditations over what to do about Atlas's breach of faith, the improved structure of hinge which is the subject of this suit flashed across his mind (Tr. 30 App. 24). This hinge is in evidence as Exhibit 8, and a box containing the hinge is in evidence as Exhibit 9, also as Exhibits 12C and 13C. This new hinge not only eliminated the necessity of covering the prongs of his first conception (Tr. 36 App. 29), Exhibits 12A and 13A, but it was much better attached to the box and formed a much stronger assembled structure than the hinge of Exhibits 12A or 13A or Exhibit 11 (Tr. 36, 38 App. 29, 31). It also cost less to market (Tr. 45 App. 36).

Plaintiff's competitors paid him one of the highest compliments of success by copying this improved hinge that he placed on the market (Tr. 58, 62, 63 App. 45, 62, 63). Copying has been substantial. The invention filled a long existing want in the industry. One competitor, Thurston, said he had not a doubt but that before long every box maker would use the invention (Tr. 86 App. 64). This is one of those cases where now that the invention is accomplished, it seems simple. It is so simple, you do not see how it could be missed (Tr. 93 App. 69).

One competitor said (Tr. 93 App. 69), "Now that I have seen it, it seems very logical, it seems as if it was the thing that somebody should have done years ago, it seems so logical, how could anybody have missed it up until now?"

The hinged box is better structurally because each of the plates of the hinge is better attached to the cardboard back wall. The plates are so well attached that they cannot move in any direction under the powerful stresses due to the spring action. The plates become integrated with the back wall and are substantially one piece therewith. This strengthens both the back wall and the hinge plate, as each supports the other. Consequently, each may be made of thinner stock. Appellant's spring hinge box is better in appearance because, being a stronger structure, it maintains the body and cover sections better aligned so that they close together more accurately. It is also of better appearance because the attaching prongs for the hinge plates are a large number of small prongs as distinguished from a few large prongs. These small prongs are headed over in small areas and lie substantially flush with the outer surface of the box so as to be smooth therewith. They show but slightly and in some coverings, such as plush, are almost invisible.

The hinge box is of lower cost because the tools to produce it are simpler; there are fewer parts; punching of the shooks, or box and cover sections, is eliminated; no backing to cover any protruding prongs is necessary; and there are fewer seconds or rejects.

Novelty.

What Appellant Young has done for the box trade is admittedly new, Appellee having gone on record to this effect as shown by the following quotation from the Record (Tr. 112, 113 App. 82, 83).

> Mr. Schimmel "... But from the way the art has developed here, presumably the examiner did not find the exact structure in a single reference. He couldn't find a single reference that had this specific hinge and the attaching means.... We have to concede that. There is no anticipating reference. There is a build-up of elements shown to be in individual patents.... Well, as to the novelty, I think we can concede it is novel, because we don't have an anticipating reference, single anticipation, ..."

Although admittedly what Appellant has done is new or novel, in view of the holding that the accomplishments of

Young were not inventive, it is necessary to examine the extent of this novelty and just what Appellant has done for the box trade.

Prior to the advent of Appellant's getting into the hinging of pasteboard boxes with metal hinges, corner stays or angle irons had been attached to the outside corners of cheap pasteboard boxes for over fifty years by the use of a plurality of prongs projecting from a hole in the corner stay. It was used on a certain type of set-up box and was well known to most all box manufacturers. It was a rigid angle iron affair, something that could not be used, and had no appeal in the fancy box business.

Also just prior to the advent of Appellant's invention, there had been several attempts made to apply a metal spring hinge to the cardboard shooks of a box, Exhibits 3, 4, 5, A (App. 95), C (App. 103). The facts as above stated showed that much complexity was resorted to. Ugly reinforcements which were expensive were utilized, which necessitated the application by hand of a special fancy backing to match up with the fancy covering on the box, which covering was in place before the hinge was applied (Tr. 75 App. 57). The two attempts made by the Rhodes patents were not commercial and never got onto the market (Tr. 100 App. 74, Tr. 19 App. 16). The other construction shown in Exhibits 3 and 4 also was of the type requiring a complicated reinforcement. The showing in the patent to Bicker could not be used for a spring hinge (Tr. 78 App. 58). It did show a mounting plate on the *outside* surface of a box, which plate had means to receive fingers which were one piece with the cover and had to be rolled through openings in the plate after the plate was applied in a separate operation. It was impossible for a spring to be applied. It was an assembly operation of the cover on the body, not the quick operation which was the characteristic of the invention here in suit.

Against this background of unsatisfactory box hinging, Appellant appears with new ideas.

Young was the first to conceive of attaching rectangular flat metal plates of an all-assembled spring hinge directly to a cardboard box without reinforcement. His fundamental arrangement was to place the two box shooks with their back walls in adjacency on an anvil and place a hinge with prongs which would pass through these back walls and be bent over to hold the hinge in place all in one operation. Thus, it was necessary to only position the two box shooks, position the hinge, and press the same into place, such as by hammer action, and the job was done. Appellant's first attempt was the cutting out of long prongs, Exhibit 6, punching the back walls of the box, then putting the prongs through the holes so punched, and bending them over by a die which had a *movement* to bend the prongs into position. While meditating over a breach of confidence in his pursuing of this first inventive thought, Appellant had a flash of conception (Tr. 30 App. 24) of the much more improved structure which is now presented to this court. This second conception which flashed into his mind when in difficulty was to eliminate the necessity of punching holes in the shooks, eliminate the necessity of a movable die, and eliminate the necessity of requiring a backing over the prongs which proceeded from the inner surface of the box to the outer surface of the box where they were bent over. This new conception was of providing holes in the hinge plates with a plurality of projections of *arcuate* form around the edge of the circular holes, which would extend in a plurality of different directions and then to drive these prongs through the cardboard shooks against an anvil which would bend them over. He found that by doing this, the variety of directions of the prongs better supported the hinge on the cardboard wall, and the cardboard wall and hinge became as one piece, each reinforcing the other and making it possible to use in both the metal plate and the cardboard back a lighter stock. The stiffness thus accomplished was highly desirable, as there is a very strong tension in a snap action spring hinge acting on the cardboard wall which tends to bend the same as the shooks of the box are swung from open to closed position. The small prongs also were so hidden in the box that it was unnecessary to apply an additional backing on the box. He reduced the cost enormously and made a better hinge. Thus, he became the first also to attach a metal hinge plate of a spring hinge to a cardboard box by almost invisible multiple spurs, and Young was the first to integrate a metal plate of a spring hinge and a cardboard wall so that each stiffened the other and better supported the other at the time of the hinge action.

It was made plain that a spring hinge has to be on the *inside* of a box in order for the spring to function (Tr. 78 App. 58), while as we have seen, the angle iron supporting stay was always on the *outside* of a box and had to be. The question that arose in the mind of the judge below and one which might naturally arise with anyone dealing with this matter is why the box makers who knew of this corner stay construction and knew of the failings of the spring hinge did not think of what Appellant thought of and make application of it. In trying to get at the answer to the question, the Record should be examined on the point. Mr. Thurston, the inventor of a number of different patents and a competitor of Appellant's, was asked (Tr. 90, 91 App. 68):

> "Did it ever occur to you that a stay such as that might be used for securing a hinge to a box?"
>
> Answer: "The thought never crossed my mind."
>
> ". . . Could a spring hinge be applied on the outside of a box?" (Tr. 91 App. 68).
>
> Answer: "Could not."
>
> Question: "Would that appeal to you as a reason why box manufacturers . . . who had always known of a corner stay, as a reason why that would not be applicable to the application of a hinge in this manner?"
>
> Answer: "It's possible, because the two operations are so far apart, you don't connect a corner stay with a hinge very often."

The witness further stated (Tr. 93 App. 69):

> "Now that I have seen it, it seems very logical, it seems as if it was the thing that somebody should

> have done years ago, it seems so logical, how could anybody have missed it up until now?"

In cross questioning, Mr. Thurston stated when referring to the attaching means (Tr. 94 App. 70), in answer to the question

> "Isn't the only difference between those two the number of prongs?"
>
> "Well, . . . the only actual physical difference in the two hinges is in the prongs, but in the application you got something else again."

Then further on (Tr. 94 App. 70) he stated:

> "Well, you couldn't make a hinge action with a spring hinge if it were attached to the outside of the box. But you could attach it with a prong, any type of a prong, or attach a piece of metal to a piece of cardboard. It wouldn't make any difference whether you attached it to the outside or inside of the box."

Mr. Thurston further stated (Tr. 98 App. 72, 73):

> ". . . but then we have never had good attaching for a hinge, because these prongs have to be adjusted with the die by the die sliding over them and pushing them down instead of the die coming down and pushing down in one slap.

Mr. Thurston was there referring to the difference between the first prong that Mr. Young got up and the form which is now before the court.

The testimony as referred to above shows that there was such a wide difference in the application of the corner stay and the spring hinge that the box maker *just did not connect the two in any way.* Here was this prong type of attachment for a corner stay right before a box maker's eyes for fifty years and yet nobody ever thought of putting it into a spring hinge because the usage of the two parts was so far removed that the earlier usage never suggested the thought to anyone, and yet after it was done, it proved to be an outstanding success and a most remarkable improvement.

Improvement.

There is also no question but what Appellant has done is an improvement. The court stated (Tr. 63 App. 48):

> "I agree that it has been an improvement, and the trade has recognized it as such, and that there has been a pirating of his idea. I will admit that for the purpose of the record."

Again Tr. 64 App. 49 the court stated:

> ". . . it appears to be a decided improvement over past performance; also of similar individuals engaged in the same business. . . . You are on second base at the present time."

The court further asked (Tr. 86 App. 64):

> "Do you say that this is an improvement of the character that all of those engaged in a similar business would presumably adopt this type of hinge?"
>
> Answer: "I have no doubt but what every boxmaker will use it."

Mr. Thurston, a competitor, stated with reference to this hinge (Tr. 92 App. 69):

> "I think it's an excellent way to attach the hinge to the box, the best that we have seen. It just didn't come to me any more than it has come to anybody else."

Further, Tr. 106 App. 78, the court stated:

> ". . . the Young hinge, or the mechanism that goes with it, is a very definite improvement, in my view, over what has been used in the trade hitherto."

The court also made a finding to this effect, Finding No. 6.

> "6. The testimony at the trial indicates that plaintiff's construction is an improvement over the prior art as depicted by Rhodes and Bicker."

From the above it will appear that what Appellant has done is novel as admitted by the Appellee. Further, what he has done is an improvement over what anybody has done before. His competitors thought well enough of it to copy it, and one of these competitors predicts that it would be used by every box manufacturer before long. Thus, there is a showing of a want in the trade for what Appellant has developed and an adoption by the trade of this development.

When we have these factors of novelty, improvement, filling a long-felt want in the trade, and extreme simplicity, usually invention is found, especially when these factors would generally imply definite physical improvements, definite appearance improvements, and at the same time much reduced cost. We have a better box at less cost than this art has ever seen. Its simplicity commends it, and this same simplicity which is the highest form of invention has been brushed aside by the court below to deny this Appellant the patent which he deserves.

The Law.

There have been expressions by this court and the Supreme Court concerning the patentability of inventions which have been heretofore presented to them, which we will now examine.

Hindsight.

Justice Robb of this Court in *re Klausmeyer,* 56 App. D. C. 89, 90; 10 F. (2d) 654, 655 remarked:

> "Had the Metzger patent been at all suggestive of applicant's device, it is strange that skilled mechanics should have overlooked it for more than 30 years. Applicant has done more than merely drill a hole in the nut. He conceived the idea of drilling such a hole as to permit inspection of threads of the nut, and this, in our view, involved more than the exercise of mere mechanical skill."

This is the history of many inventions, especially simple ones and has been dealt with by this Court and the Supreme Court in attempting to view an invention by application of the knowledge of the art at the time the invention was made, to determine whether it has filled a long felt want. In so doing they have paid high tribute to simplicity.

The law has recognized the fact that after an invention has been made and understood, no problem any longer exists, but that it takes ingenuity beyond mechanical skill to *first* conceive of an advance although sometimes it seems simple when looking back.

This court and the Supreme Court have expressed themselves on this point.

Lucke et al. v. *Coe, Com'r of Patents* (Feb. 5, 1934), 63 App. D. C. 61, 65; 69 F. (2d) 379, 383, Justice Robb said:

> "The record discloses that the Hoover Company maintains a corps of engineers whose duty it is to design improvements in suction cleaners. All the patents relied upon by the Patent Office as anticipating Lucke's device were before these engineers, yet, highly skilled in the art as they were, they were unable to do what Lucke has done; namely, produce a machine that is a greater advance over the prior art than any one of the patents referred to by the Patent Office tribunals. It is comparatively easy, now that the Lucke device is in evidence, to take this and that from the references and achieve a *nunc pro tunc* solution of the problems confronting Lucke when he made his invention. We rule, therefore, that the claims denied by the Patent Office should be allowed."

Hartford-Empire Company v. *Conway P. Coe, Commissioner of Patents* (December 7, 1936), 66 App. D. C. 344, 347; 87 F. (2d) 741, Justice Van Orsdel said:

> "one skilled in the art, prior to Peiler's discovery, possessed all the knowledge that Peiler possessed after applying to this problem for years all his superior skill in this art. . . . We have had occasion in many instances to condemn the hindsight *nunc pro tunc* method employed to justify the refusal of valuable inventions in which the patentees are entitled to the protection afforded by the Constitution and the laws."

Kelly, et al. v. *Coe, Com'r Pats.* (September 19, 1938), 699 App. D. C. 202, 209; 99 F. (2d) 435, Justice Miller quoted and said:

> "For almost a quarter of a century following the Parsons invention efforts were made by loading marine engineers of the world to connect the engine and turbine to the same propellor shaft, but without success.
>
> "It thus appears that the best marine engineers in the world, with unlimited means at their command, failed to solve the problem, the solution of which the tribunals of the Patent Office and the court below have ruled to be obvious to any one skilled in the art.
>
> "Where, as here, the new device is also useful and marks a distinct and novel advance in the art, it should receive patent protection. For almost 25 years, as we have seen, patents have been granted in this art on devices that proved to be practically worthless, and yet appellant has been refused a patent on his successful device because the Patent Office has found that, by taking this and that from the unsuccessful patents, the result achieved by appellant could have been accomplished.
>
> "The Commissioner's argument in the present case comes down to the same result. He contends that anyone skilled in the art could have taken this and that from the various patents and, putting them together, could have devised the Kelley method. But the facts remains that, in the face of a crying need for a new process or method in the industry, not one of the best engineers in the world, with their attention especially directed to the subject for approximately thirty years, was able to see what Kelley saw, or to produce the result which he produced. The evidence in support of appellant's application establishes beyond doubt their right to the issuance of a patent."

Poulsen et al v. *Coe, Com'r. Pats.* (March 17, 1941), 73 App. D. C. 324, 334; 119 F. (2d) 188, Justice Stephens said:

> "We think morevoer that the improvement made by the appellants, simple though it may seem from the point of view of hind sight, was inventive in character."

Loom Co. v. *Higgins,* 105 U. S. 580 in answer to the argument that the combination was a mere aggregation of old and well-known devices said at page 591:

> "Now that it has succeeded, it may seem very plain to any one that he could have done it as well. This is often the case with inventions of the greatest merit. It may be laid down as a general rule, though perhaps not an invariable one, that if a new combination and arrangement of known elements produce a new and beneficial result, never attained before, it is evidence of invention."

In the case of *Diamond Rubber Co.* v. *Consol. Tire Co.,* 220 U. S. 428, Justice McKenna said at page 435:

> "Knowledge after the event is always easy, and problems once solved present no difficulties, indeed, may be represented as never having had any, and expert witnesses may be brought forward to show that the new thing which seemed to have eluded the search of the world was always ready at hand and easy to be seen by a merely skillful attention. But the law has other tests of the invention than subtle conjectures of what might have been seen and yet was not."

In the recent case of *Goodyear Co.* v. *Ray-O-Vac Co.* (Feb. 28, 1944), 321 U. S. 275 Justice Roberts said at page 279:

> "Viewed after the event, the means Anthony adopted seem simple and such as should have been obvious to those who worked in the field, but this is not enough to negative invention. During a period of half a century, in which the use of flashlight batteries increased enormously, and the manufacturers of flashlight cells were conscious of the defects in them, no one devised a method of curing such defects. Once the method was discovered it commended itself to the public as evidenced by marked commercial success. These factors were entitled to weight in determining whether the improvement amounted to invention and should, in a close case, tip the scales in favor of patentability."

Other circuits reflect the same view.

In analyzing Appellant's invention after it has been an accomplished fact, its simplicity logically raises the question as to why somebody did not think of it before. After we see what Appellant has done for the art, it is so easy to see where in the art there are located the prongs which he used. The structure which he employed indeed seems so simple that Mr. Thurston's expression (Tr. 93 App. 69) "How could anybody have missed it up to now?" seems quite apropos. The art had gone on for a long number of years but had never perceived it. The facts of this case fall directly into line with the cases under this heading "Hindsight" and are another example of the use of the inventive faculties rather than mere mechanical skill.

Simplicity.

The law has recognized that in many instances the simplest inventions require the greatest genius, for if something can be done in a simple, effective manner and yet be as good or better than anything done before, it is indeed a credit to the one having this happy thought. This court and the Supreme Court have expressed themselves on this point as follows:

Kelley et al. v. *Coe, Com'r Pats.* (September 19, 1938), 69 App. D. C. 202, 209; 99 F. (2d) 435, Justice Miller quoted and said:

> "For almost a quarter of a century following the Parsons invention efforts were made by leading marine engineers of the world to connect the engine and turbine to the same propellor shaft, but without success.
>
> "It thus appears that the best marine engineers in the world, with unlimited means at their command, failed to solve the problem, the solution of which the tribunals of the Patent Office and the court below have ruled to be obvious to any one skilled in the art.
>
> "Where, as here, the new device is also useful and marks a distinct and novel advance in the art, it should receive patent protection. For almost 25 years, as we have seen, patents have been granted in this art on devices that proved to be practically

> worthless and yet appellant has been refused a patent on his successful device because the Patent Office has found that, by taking this and that from the unsuccessful patents, the result achieved by appellant could have been accomplished.
>
> "The Commissioner's argument in the present case come down to the same result. He contends that anyone skilled in the art could have taken this and that from the various patents and, putting them together, could have devised the Kelley method. But the fact remains that, in the face of a crying need for a new process or method in the industry, not one of the best engineers in the world, with their attention especially directed to the subject for approximately thirty years, was able to see what Kelley saw, or to produce the result which he produced. The evidence in support of appellants' application establishes beyond doubt their right to the issuance of a patent."

This Court follows the Supreme Court.

In *The Barbed Wire Patent,* 143 U. S. 275, the Supreme Court said at pages 282, 283:

> "Under such circumstances courts have not been reluctant to sustain a patent to the man who has taken the final step which has turned a failure into a success. In the law of patents it is the last step that wins. It may be strange that, considering the important results obtained by Kelly in his patent, it did not occur to him to substitute a coiled wire in place of the diamond shape prong, but evidently it did not; and to the man to whom it did ought not to be denied the quality of inventor."

See also the above-quoted cases. *Diamond Rubber Co.* v. *Consol. Tire Co.,* 220 U. S. 428, and *Goodyear Co.* v. *Ray-O-Vac Co.,* 321 U. S. 275.

The facts of the present case appeal are similar to the above cases dealing with the simplicity of the invention. Operations of production are simplified; whole steps in assembly are omitted, labor being minimized, and yet an improved article requiring no added fancy covering on the back has been produced. In the art of applying a metal hinge to a cardboard box, nothing has been so simple, so strong, and of such attractive appearance as the hinge which Young has produced; further the facts show it was not obvious.

Long-Felt Want.

Another factor in the determination of the existence of invention is the answer to the question of whether there has been a long-felt want for the invention, for if there has been a long-felt want, it shows that this problem was active before those working in this art and an ever challenge to be satisfied. This court and the Supreme Court have also expressed themselves on this point.

This court follows the rule laid down by the Supreme Court many years ago in *Loom Co.* v. *Higgins,* 105 U. S. 580 at 591 where the court stated:

> "This argument would be sound if the combination claimed by Webster was an obvious one for attaining the advantages proposed,—one which would occur to any mechanic skilled in the art. But it is plain from the evidence, and from the very fact that it was not sooner adopted and used, that it did not, for years, occur in this light to even the most skilful persons. It may have been under their very eyes, they may almost be said to have stumbled over it; but they certainly failed to see it, to estimate its value, and to bring it into notice. Who *was* the first to see it, to understand its value, to give it shape and form, to bring it into notice and urge its adoption, is a question to which we shall shortly give our attention. At this point we are constrained to say that we cannot yield our assent to the argument, that the combination of the different parts or elements for attaining the object in view was so obvious as to merit no title to invention."

Also in a later case of the Supreme Court, *Paramount Corp.* v. *Tri-Ergon Corp.* (March 4, 1935), 294 U. S. 464 at 474 the court stated:

> "Where the method or device satisfies an old and recognized want, invention is to be inferred, rather

> than the exercise of mechanical skill. For mere skill of the art would normally have been called into action by the generally known want. See Loom Co. *v.* Higgins, 105 U. S. 580, 591; Krementz *v.* Cottle Co., 148 U. S. 556, 560; Hobbs *v.* Beach, 180 U. S. 383, 392; Carnegie Steel Co. *v.* Cambria Iron Co., 185 U. S. 403, 429, 430; Expanded Metal Co. *v.* Bradford, 214 U. S. 366, 381."

In *Ray-O-Vac Co.* v. *Goodyear Tire & Rubber Co., Inc.* (July 22, 1942) (District Court, E. D. Illinois), 45 Fed. Supp. 927, 931 Judge Lindley stated:

> "No one of the prior patents contained any such teaching, nor did any of the prior uses offered in evidence disclose any such suggestion. This was his idea, a new and useful one satisfying a long felt want, followed by commercial success, a striking example of which is the acceptance of plaintiff's battery in competitive bidding by the United States Signal Corps, where long life of the battery in the field is highly desirable."

This case is cited, as it was affirmed on appeal to the Supreme Court of the United States.

The facts in the present case establish very clearly that there is a long-felt want in the trade for the conception of Appellant. Mr. Thurston has testified that he believes every box maker would use the invention, which point was brought out by the court (Tr. 86 App. 64):

> "The Court: Do you say that this is an improvement of the character that all of those engaged in a similar business would presumably adopt this type of hinge?
>
> "The Witness: I have no doubt but what every box maker will use it."

The court has also stated that there has been pirating of Appellant's idea (Tr. 63 App. 48). Also Mr. Thurston in cross examination (Tr. 98 App. 72, 73) stated: "we have never had good attaching for a hinge". We thus show clearly from the facts of this case that there is a want in the box trade for a hinge such as created by Appellant, which is one more element used as a test by the courts in the determination of invention.

There has been a tendency throughout this case to overlook the fact that it was Appellant who had the basic conception of applying a two-part spring hinge such as shown in the old metal box or in the boxes of Exhibits 3 and 5 directly to a cardboard box without any U-shaped prong fasteners or reinforcing metal pieces, or such as shown in either of the Rhodes patents. (The Bicker patent is not a two-part spring hinge and is in a different class.) The tendency in cross examination, for instance, of Mr. Thurston by Mr. Schimmel, is to have the witness Thurston compare the hinge of the application in suit, Exhibits 8, 9, 12C, 13C, and 15, with Appellant's own first step in his invention consisting of the hinge having triangular flat prongs, Exhibit 7, of the hinge alone, Exhibits 11, 12A and B, 13A and B, and 14, and (Tr. 94 App. 70) Mr. Schimmel has asked:

> "Q. Isn't the only difference between those two the number of prongs?
>
> "A. Well, we can't—the only actual physical difference in the two hinges is in the prongs, but *in the application you get something else again.*" (Emphasis ours.)

The Court should appreciate that Appellant's invention in the application in suit was really in two steps. His first thought was that of Exhibit 7 and its application as in Exhibits 11, 12A and 12B, 13A and 13B, and 15, while the second step of his invention was the better attachment, as shown in Exhibits 8, 9, 12C, 13C, and 15. Thus, the witness has been asked to compare the conception which is here in suit with appellant's first form of his invention. Both forms emanated from the inventive faculties of Appellant and this prong structure of Exhibit 7 is not prior art. Appellant was the first one to conceive of the application of two rectangular metal plates pivoted together, with the plates attached *directly and solely* to the inside back wall of a cardboard box. His first step on this matter was somewhat imperfect. His second conception, improving his first step, brought material success. The invention is beyond prong attaching means as the application of the hinge to a box is a different vision as stated by Mr. Thurston "in the application you get something else again" (Tr. 94 App. 70).

Mr. Schimmel in further examining Mr. Thurston (Tr. 98 App. 72, 73) brought out that the box trade had never previously had a good attachment for a hinge

> "but then we have never had good attaching for a hinge, because these prongs have to be adjusted with the die by the die sliding over them and pushing them down instead of the die coming down and pushing down in one slap".

Thus, although we have had in existence hinges for cardboard boxes and metal stays for cardboard boxes for over fifty years and we have never had a good attaching means for a hinge, no box maker ever thought of using the prongs of the corner stay of Powell for attaching a hinge in place. There are no similarities between a corner stay and the hinge in manufacture such as would cause any box maker to connect the two together; they perform opposite functions; the corner stay holds sides of a box in fixed relation to one another; a hinge is for the express purpose of permitting relative movement between adjacent parts of a box; they are non-analogous.

This Court and the Supreme Court have also expressed themselves in similar situations. In the case of *Hobbs* v. *Beach,* 180 U. S. 383, the Supreme Court had before it the question of the application of a corner stay to a box. Testimony showed that in an addressing machine there was an application of a similar device. The court, however, in weighing this contention held there was invention in the application of a strip to the corner of boxes and stated at page 392 as follows:

> "It appears from the testimony that several of these addressing machines, of which that of Dennis and York is a type, and which are now claimed to

> have inspired the Beach patent, had been upon the market for many years, and yet it never seems to have occurred to any one engaged in the manufacture of paper boxes that they could be made available for the purpose of attaching strips to the corners of such boxes, This very fact is evidence that the man who discovered the possibility of their adaptation to this new use was gifted with the prescience of an inventor. While none of the elements of the Beach patent—taken separately or perhaps even in a somewhat similar combination—was new, their adaptation to this new use and the minor changes required for that purpose resulted in the establishment of practically a new industry, and was a decided step in advance of any that had theretofore been made.''

Further, at page 392 and 393 the following statement appeared:

> ''With all the anticipating devices before us, it is apparent that the mere change in the shape of the dies was a minor part of the work involved in so changing the Dennis and York machine as to make it perform a wholly different function, the invention consisting rather in the idea that such change could be made, than in making the necessary mechanical alterations.''

There is also a decision of this Court in *re Bliss,* May 7, 1928, 58 App. D. C. 152, 26 F. (2d) 524, which relates to a shipping case and in holding invention cites a number of prior cases where the articles were simple and the prior art was contended to have the suggested improvement. The court's statement through Justice Van Orsdel, at page 153 of App. D. C., is as follows:

> ''In inventions relating to simple articles, which consist largely in the making of valuable improvements over the prior art, it is quite usual to find a counterpart in some other art which is suggestive of the invention under immediate consideration. For example, an angle iron used to protect the edge of a wooden pavement did not anticipate an angle iron used to protect the edge of a concrete or asphalt

> pavement. Goodwin *v.* International Steel Tie Co. (C. C. A.) 2 F. (2d) 198. It was also held that a celluloid cap for salt cellars was not anticipated by a celluloid cap for talcum bottles. Westmoreland Specialty Co. *v.* Hogan (C. C. A.) 167 F. 327. It was likewise held that a metal dome, driven into the bottom end of chair legs to take the place of castors, is not anticipated by a similar device used on the bottom of travelers' grips. Barry *v.* Harpoon Castor Co. (C. A. A.) 209 F. 207.
>
> "While the present case is a close one, we are of opinion that the applicant has contributed something to the art, entitled to protection under the patent laws. It has been the policy of this court, as announced in many cases, to give the inventor the benefit of the doubt when any doubt exists. We think the present case comes within the rule, and that the applicant is entitled to a patent."

There is more involved than attaching a plate to cardboard, which is all the Patent Office and the lower Court seems to visualize. There is the conception to be considered of the swinging of two parts, the clearances for a spring, and the arrangement so that a spring can act. Nothing in the corner stay suggests this. As no hinge action is involved, no spring could properly be attached to an angle iron on the outside even if the two parts of the angle iron were pivoted.

A hinge plate when swung against the spring tension has always worked against its holding on the opposite cardboard face as the movement of one part with reference to the other occurred. The pressure of the prongs against the opposite surface alone, such as Exhibit 7, held it. The objection of the working of the plate with reference to the cardboard was overcome in an entirely different manner by the use of prongs arranged at different angles and virtually riveted in; pressure on the opposite side of the cardboard was not used. This had never before entered anybody's mind. This problem never existed in the corner stay on a box, as it was rigid and no working or movement tended to occur. It took Young to have this ingenious thought. The hinge when so attached by the multiplicity of prongs practically amalgamates the plate to the cardboard so that neither one could move with reference to the other because supported by prongs in many different directions. Further, the appearance from the outside is not objectionable. This never occurred to anybody else. Appellant's competitor, Mr. Thurston, when queried by the Court as to what he thought of the idea stated as follows (Tr. 85, 86 App. 64):

> "The Court: As an expert in the business of manufacturing boxes and containers of this character, and having in mind your familiarity over twenty-five years of experience with hinges and other apparatus of a similar character in relation to boxes of the kind that we have under discussion here, would you say that this is an improvement over what your past experience has been in relation to the same thing?
>
> "The Witness: It definitely is.
>
> "The Court: Do you say that this is an improvement of the character that all of those engaged in a similar business would presumably adopt this type of hinge?
>
> "The Witness: I have no doubt but what every boxmaker will use it."

Appellant has not bodily taken what is shown in the corner stay but has rearranged the openings to be in the middle along the metal of each hinge plate and formed the prongs by specially formed piercing and forming tools. The detail of these prongs is also brought out in cross examination by Mr. Schimmel to be so formed that when struck they will flare outwardly to grip the cardboard in a specified manner.

Mr. Schimmel has also admitted that what Appellant has done is novel and that they have no anticipation for it (Tr. 113, App. 83).

> "Mr. Schimmel: Well, as to the novelty, I think we can concede it is novel, because we don't have an anticipating reference".

The whole question then is whether or not what Appellant has done is invention with a lack of any anticipation in the art.

Copying or making up hinges substantially identical with what Appellant has, has been marketed in a large number of instances. The Court has gone on record to the effect that there has been pirating in the trade (Tr. 62 App. 48).

> "I will assume that the idea is being pirated at the present time in the trade."
>
> "I agree that it has been an improvement, and the trade has recognized it as such, and that there has been a pirating of his idea. I will admit that for the purposes of the record" (Tr. 63 App. 48).

These are all elements which the law has recognized as evidence of invention where a situation exists such as here presented.

Conclusion.

The industry had never had a good attachment of a metal spring hinge to a cardboard box. A long-felt want existed. Appellant has come up with the best spring hinge attachment that art has seen. Some competitors have copied it. One competitor believes the rest will want to adopt it.

The development is admitted to be novel and the Court below has said it was an improvement. It is simpler than anything before yet does a better job and costs less. The law shows these are the elements that determine invention.

The Findings of Fact 9 and 10 that the combination does not rise to the dignity of invention is unsupported by the evidence and is contrary to the evidence which affirmatively establishes invention is involved.

Respectfully submitted,

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